

Quarterly Groundwater Monitoring Report First Quarter 2005

**7-Eleven Store #20244
3625 MacDonald Avenue
Richmond, California**

SECOR Project No.: 77EL.20244.05

Submitted by:
SECOR International Incorporated
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Prepared on behalf of:
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Mr. Ken Hilliard
P.O. Box 711
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May 17, 2005

Prepared by:



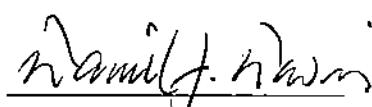
Colin Ryan
Staff Geologist

Reviewed by:

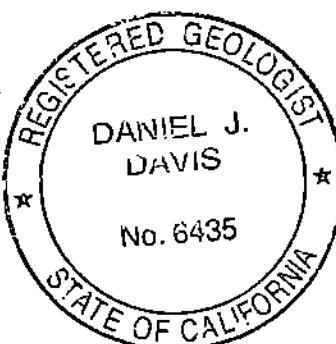


Damon Brown
Staff Geologist

Reviewed by:



Daniel J. Davis, R.G.
Senior Geologist



DATE: May 17, 2005

S E C O R**7-ELEVEN, INC. QUARTERLY REPORT**

Store Number:	7-Eleven Store #20244
Site Address:	3625 MacDonald Avenue, Richmond, CA
7-Eleven Contact:	Mr. Ken Hilliard
Consulting Company:	SECOR International, Inc. – Mr. Jaff Auchterlonie
SECOR Project No.:	77EL.20244.05
Primary Agency:	Regional Water Quality Control Board - San Francisco Bay Region (RWQCB – SFBR)

WORK PERFORMED THIS QUARTER [First – 2005]

1. Conducted groundwater monitoring and sampling of five wells on March 21, 2005.
2. Conducted periodic oxygen injection into onsite wells.
3. Prepared quarterly monitoring and sampling report.
4. Submitted *Well Installation and Oxygen Injection Feasibility Test Report* on February 18, 2005.

WORK PROPOSED FOR NEXT QUARTER [Second – 2005]

1. Conduct quarterly groundwater monitoring and sampling.
2. Continue periodic oxygen injection into the onsite wells.
3. Prepare quarterly monitoring and sampling report.

DISCUSSION

The site is a 7-Eleven convenience store and former gasoline service station (Figures 1 and 2). Underground storage tanks (USTs) no longer exist at the site. Monitoring and sampling have been conducted at the site since the first quarter of 1999. The current groundwater monitoring and sampling data are summarized in Table 1, and presented in Figures 2 and 3. Historical groundwater monitoring and sampling results are summarized in Table 2. Well completion details are summarized in Table 3.

Current Site Information

Current Phase of Project:	Groundwater Monitoring
Frequency of Monitoring and Sampling:	Quarterly, Five wells - MW-1 through MW-5
Are Liquid Phase Hydrocarbons Present On-site:	No
Water Supply Wells within a 2,000-foot radius and their Respective Direction:	None
Current Remediation Techniques:	Pending
Permits for Discharge:	None
Historic Range in Depth to Water, Q1-99 to Q1-05	MW-1, 8.15 to 19.99 feet bgs
<u>Current Quarter Monitoring Data</u>	(See Figure 2 and Table 1)
Wells Monitored and Sampled:	Five wells- MW-1 through MW-5
Dissolved Oxygen Concentrations Measured In:	Five wells- MW-1 through MW-5

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Depth to Groundwater (DTW)	<u>10.25 to 12.65 ft bgs</u>
Average Change in Groundwater Elevation Since Last Event:	<u>1.64 foot increase</u>
Groundwater Flow Direction and Gradient:	<u>South-Southeast @ 0.02 foot per foot (Figure 2)</u>
<u>Current Quarter Analytical Data</u>	<u>(See Figure 3 and Table 1)</u>
Maximum TPHg Concentrations	<u>MW-2, 2,300 µg/L</u>
Maximum Benzene Concentrations	<u>MW-3, 120 µg/L</u>
Maximum MtBE Concentrations	<u>MW-3, 18,000 µg/L</u>
Maximum TBA Concentrations	<u>MW-3, 950 µg/L</u>

BACKGROUND

On May 20, 1998, Fluor Daniel GTI supervised the advancement of four Geoprobe borings (GP-1 through GP-4) adjacent to the two 10,000-gallon USTs at the site. The work was required by the Contra Costa Environmental Health Department (CCEHD) prior to a proposed re-lining of the two 10,000-gallon USTs as part of a fuel system upgrade at the site. Soil sample analytical data indicated maximum benzene and total petroleum hydrocarbons as gasoline (TPHg) concentrations of 0.048 milligrams per kilogram (mg/kg) and 1.3 mg/kg, respectively. Methyl-tert-butyl ether (MtBE) was detected at a maximum concentration of 0.62 mg/kg. Grab groundwater samples collected from the bases of the borings contained up to 19 micrograms per liter (µg/L) benzene, 11,000 µg/L TPHg, and 4,800 µg/L MtBE. Based on analytical data from the Geoprobe borings, permit approval to upgrade/reline the USTs at the site was denied by the CCEHD, and the tanks were subsequently removed from the site.

On December 16, 1998, two 10,000-gallon USTs and one 6,000-gallon UST (with associated product piping) were removed from the site, and were not replaced. Analytical results of nine soil samples collected indicated that the highest residual benzene (0.0156 mg/kg), TPHg (110 mg/kg), MtBE (1.59 mg/kg) and tert-butyl alcohol (TBA) (0.865 mg/kg) concentrations were detected beneath the eastern end of the tank excavation and beneath the southern end of the fuel dispenser island.

To remove as much hydrocarbon adsorbed to soil as possible, the floor of the UST pit was excavated to a depth of 14.5 feet bgs, and the dispenser island area was excavated to a depth of 5 feet bgs. Maximum concentrations of benzene (0.2 mg/kg) and TPHg (68 mg/kg) were detected beneath the south end of the dispenser island excavation. The highest MtBE concentration (7.3 mg/kg) was detected beneath the southeast corner of the UST excavation. The southern end of the dispenser island excavation was further excavated to 8.5 feet bgs. A soil sample collected from the floor of the excavation contained a low concentration of MtBE (0.28 mg/kg) and did not contain detectable benzene and TPHg concentrations.

The RWQCB requested further assessment based upon the initial site investigation results. On January 22, 1999, IT Corporation supervised the installation of three 2-inch diameter

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groundwater monitoring wells (MW-1, MW-2, and MW-3). Benzene, TPHg, and MtBE concentrations in soil ranged up to 9.19 mg/kg, 1,330 mg/kg, and 12 mg/kg, respectively.

In September 1999, six Geoprobe soil borings (SB-1 through SB-6) were advanced at the site to total depths of between 19.5 and 28 feet bgs. TPHg was reported in soil at concentrations up to 20.4 mg/kg. Benzene, MtBE, and other oxygenates were not detected above laboratory reporting limits in the soil samples. Grab groundwater samples collected at the total depth of each boring contained dissolved concentrations ranging up to 1.12 µg/L benzene, 6.93 µg/L TPHg, and 6.79 µg/L MtBE (IT Corporation, 1999).

On August 24, 2001, IT Corporation supervised the installation of two 2-inch diameter groundwater monitoring wells (MW-4 and MW-5). Benzene and MtBE were not detected in soil at concentrations above laboratory reporting limits. TPHg concentrations in soil ranged from non-detectable to 12 mg/kg in sample MW-5 @ 10-10.5.

On September 14, 2004, SECOR submitted a Work Plan for Remediation Well Install and Oxygen Injection Feasibility Test to the RWQCB. The work plan proposed the installation of three oxygen injection wells (I-1 through I-3), and conducting an oxygen injection feasibility test. The work plan was approved by the RWQCB in a letter dated October 4, 2004. Oxygen injection wells I-1 through I-3 were installed on December 14-15, 2004.

A *Well Installation and Oxygen Injection Feasibility Test Report* was submitted to the RWQCB on February 18, 2005. In the report, SECOR recommended conducting periodic oxygen injection into wells I-1 through I-3 through the second quarter 2005. Evaluation of the second quarter 2005 groundwater concentration data will determine the effectiveness of oxygen injection as a remedial technique at the site.

MONITORING AND SAMPLING PROCEDURES

The depth to water was measured to within 0.01 feet bgs in monitoring wells MW-1 through MW-5 from the top of casing (TOC) using a water level indicator. Dissolved oxygen concentrations were also measured in each well using a YSI Model 550A dissolved oxygen meter equipped with a down hole sensor.

Well purging and sampling equipment was thoroughly cleaned prior to purging and sampling each well. The sampling procedure for each well included measuring the water level and checking for the presence of liquid-phase hydrocarbons (LPH), using either an electronic indicator and a clear Teflon® bailer or an oil-water interface probe. Wells not containing LPH were purged of approximately three casing volumes of water (or to dryness) using a submersible pump or bailer. The equipment and purging methods used for the current sampling event are noted on the field data sheets in Attachment A. During purging, temperature, pH, and electrical conductivity were monitored. After purging, water levels were allowed to recover to 80% of the original levels prior to collection of the water sample. Groundwater samples were collected using a disposable Teflon® bailer, placed into appropriate Environmental Protection Agency (EPA) approved containers, labeled, logged onto chain-of-custody documents, and transported on ice to a California state-certified laboratory. Copies of the field notes are presented in Attachment A.

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GROUNDWATER SAMPLE ANALYSES AND RESULTS

The groundwater samples collected from MW-1 through MW-5 were analyzed for TPHg, benzene, toluene, ethylbenzene, and xylenes (BTEX), and fuel oxygenates MtBE, TBA, diisopropyl ether (DIPE), ethyl-tert-butyl ether (EtBE), and tert-amyl-methyl ether (TAME) by EPA Method 8260B. The certified laboratory analytical report and chain-of-custody documentation are presented as Attachment B.

Groundwater analytical results are presented on Figure 3, and are summarized in Tables 1 and 2. Hydrocarbon concentrations were generally consistent with historical data.

EXTENDED REMEDIATION TESTING

Currently, SECOR is conducting periodic oxygen injection into wells I-1 through I-3 in order to determine the effectiveness of oxygen injection as a viable remedial approach. On January 11, January 25, February 8, February 23, March 8, and March 22, 2005, SECOR field personnel conducted oxygen injection into onsite wells. 150 ft³ of oxygen was injected into each well (Table 4). Dissolved oxygen (DO) concentrations were measured before and after the injection event in each monitoring well. During the first quarter events, the highest DO increase was observed in well MW-3 which showed an increase from 3.3 milligrams per liter (mg/L) to 16.0 mg/L on March 8, 2005 (Table 5). Field notes are in Attachment C.

SECOR will continue biweekly oxygen injection during the second quarter 2005. If significant increases of dissolved oxygen are maintained and corresponding decrease in levels of dissolved hydrocarbons in groundwater are detected in nearby wells, oxygen injection will be considered an appropriate remedial method at the site. A modified corrective action plan will then be submitted to present a site specific remediation plan based on the results of the feasibility results and historical site data.

PURGE AND RINSATE WATER DISPOSAL

Water generated during well sampling and equipment cleaning was pumped into a SECOR truck-mounted water tank. The water was transferred into properly labeled 55-gallon drums and stored on-site. The drummed non-hazardous petroleum hydrocarbon contaminated water is transported quarterly by Belshire Environmental to DeMenno Kerdoon in Compton, California, for disposal.

ATTACHMENTS

Figures

Tables

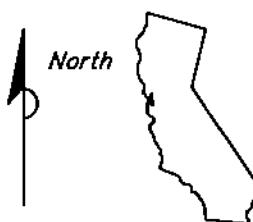
Attachment A – Monitoring and Sampling Field Notes

Attachment B – Certified Laboratory Analytical Reports and Chain-of-Custody Documentation

Attachment C – Oxygen Injection Field Notes

cc: Ms. Barbara Sieminski, Regional Water Quality Control Board, San Francisco Bay Region
Mr. Paul Andrews, Contra Costa County Environmental Health Division

FIGURES



North

1 $\frac{1}{2}$ 2 3 4

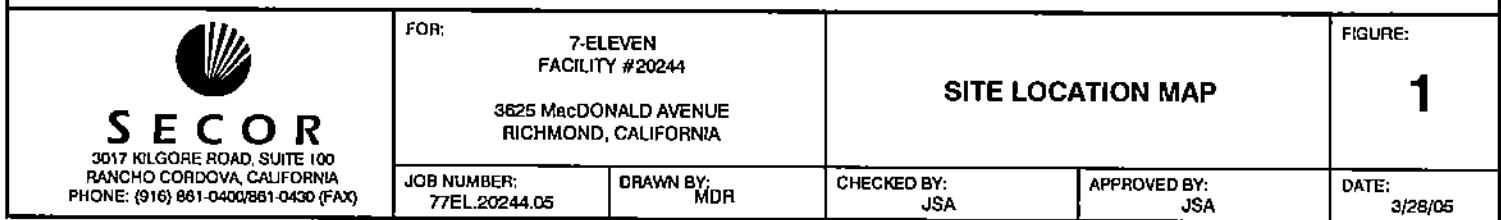
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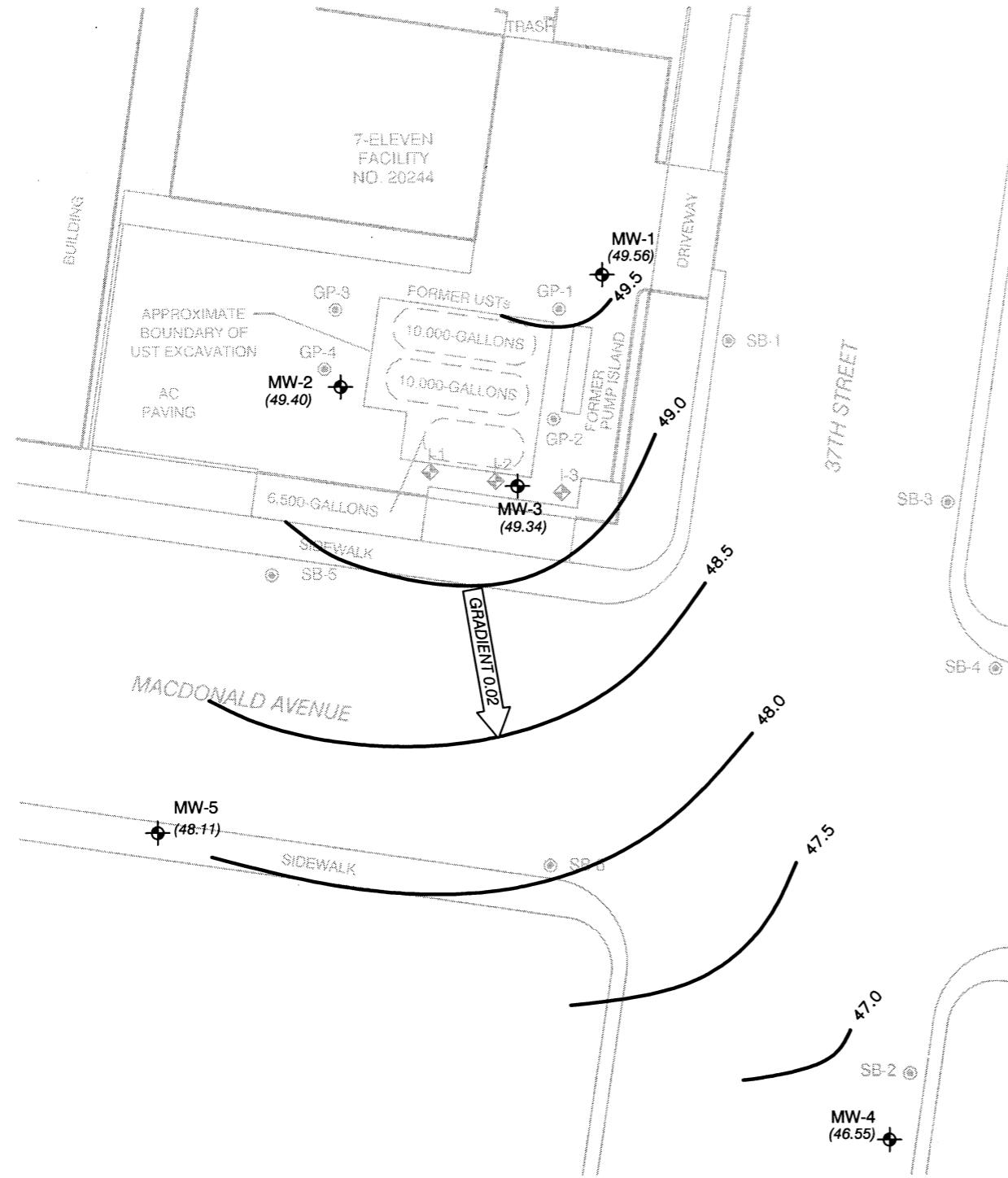
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1990 0 1000 2000 3000 4000 5000 6000 7000

SCALE (FEET)

REFERENCE: USGS 7.5 MINUTE QUADRANGLE, MONTEREY, CALIFORNIA



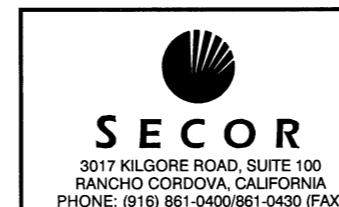


LEGEND:

- MONITORING WELL
- SOIL BORING
- OXYGEN INJECTION WELL
- GRADIENT APPROXIMATE GROUNDWATER FLOW DIRECTION AND GRADIENT FT/FT
- 0.0 GROUNDWATER ELEVATION CONTOUR (FEET ABOVE MEAN SEA LEVEL)
- (0.0) GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)

0 30 60
SCALE IN FEET

REFERENCE: THIS FIGURE IS BASED ON A "SITE PLAN" PROVIDED BY SHAW E & I, INC., DATED SEPTEMBER 2002, AND IS INTENDED FOR ILLUSTRATION ONLY.



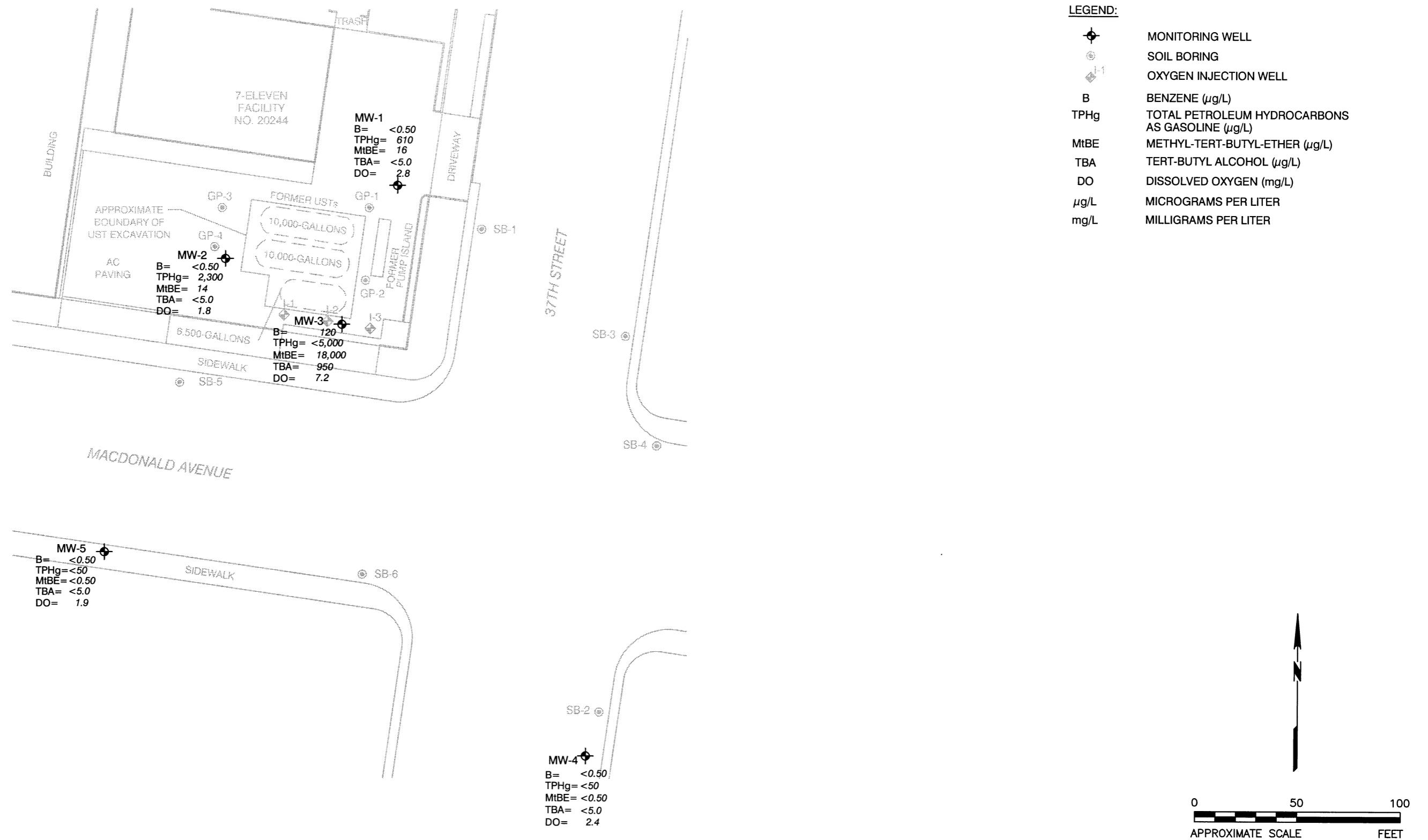
FOR:
7-ELEVEN, INC.
FACILITY # 20244
3625 MacDONALD AVENUE
RICHMOND, CALIFORNIA

JOB NUMBER: 77EL.20244.05	DRAWN BY: MDR	CHECKED BY: CR	APPROVED BY: DB
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**GROUNDWATER ELEVATION
CONTOUR MAP
MARCH 21, 2005**

2

DATE:
4/07/05



REFERENCE: THIS FIGURE IS BASED ON A "SITE PLAN" PROVIDED BY SHAW E & I, INC., DATED SEPTEMBER 2002, AND IS INTENDED FOR ILLUSTRATION ONLY.

 SECOR 3017 KILGORE ROAD, SUITE 100 RANCHO CORDOVA, CALIFORNIA PHONE: (916) 861-0400/861-0430 (FAX)	FOR: 7-ELEVEN, INC. FACILITY # 20244 3625 MacDONALD AVENUE RICHMOND, CALIFORNIA	GROUNDWATER HYDROCARBON CONCENTRATION MAP		FIGURE: 3
		MARCH 21, 2005		
JOB NUMBER: 7TEL.20244.05	DRAWN BY: MDR	CHECKED BY: BH	APPROVED BY: DB	DATE: 3/23/05

TABLES

First Quarter 2005 Groundwater Monitoring and Analytical Data

7-Eleven Store #20244
3625 MacDonald Avenue
Richmond, CA

Well ID/ Elevation (TOC)	Date	Benzene ($\mu\text{g/L}$)	Toluene ($\mu\text{g/L}$)	Ethyl- Benzene ($\mu\text{g/L}$)	Xylene ($\mu\text{g/L}$)	TPHg ($\mu\text{g/L}$)	MIBE ($\mu\text{g/L}$)	TBA ($\mu\text{g/L}$)	DIPE ($\mu\text{g/L}$)	ETBE ($\mu\text{g/L}$)	TAME ($\mu\text{g/L}$)	Notes	Dissolved Oxygen (mg/L)	DTW (feet)	SPT (feet)	WTE (feet)
MW-1 59.86	03/21/05	<0.50	<0.50	<0.50	610	16	<5.0	4.4	<0.50	<0.50	c, e	2.8	10.30	0.00	49.56	
MW-2 59.65	03/21/05	<0.50	<0.50	<0.50	2,300	14	<5.0	0.79	<0.50	<0.50	c, e	1.8	10.25	0.00	49.40	
MW-3 59.59	03/21/05	120	<50	200	61	<5,000	18,000	950	<50	<50			7.2	10.25	0.00	49.34
MW-4 59.20	03/21/05	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	e	2.4	12.65	0.00	46.55	
MW-5 58.94	03/21/05	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	e	1.9	10.83	0.00	48.11	

Explanation

TPHg = Total petroleum hydrocarbons-as-gasoline
MIBE = Methyl-tert-butyl ether
TBA = Tert-butanol
DIPE = Disopropyl ether
ETBE = Ethyl-tert-butyl ether

TAME = Tetra-methyl ether
DTW = Depth to water
SPT = Separate-phase hydrocarbon thickness
WTE = Water table elevation
TOC = Top of casting elevation in feet above mean sea level

Notes:

Samples analyzed by EPA Method 8260B
c = Hydrocarbons reported as TPHg do not exhibit a typical Gasoline chromatographic pattern.
e = Matrix Spike/Duplicate Results for the analyte Benzene were affected by the analyte concentration already present in the un-spiked sample.

Table 2
Historical Groundwater Monitoring and Analytical Data

7-Eleven Store #20244
3825 MacDonald Avenue
Richmond, CA

Well ID	Date	Benzene [µg/L]	Ethyl-Benzenes [µg/L]	Toluene [µg/L]	Phenol [µg/L]	MIBG [µg/L]	MIBE [µg/L]	TAME [µg/L]	1,2-DCA [µg/L]	SPT (feet)	WTE (feet)
Geoprobe Water Samples											
GP-1W	05/20/98	12	7.9	15	0.68	1,400	83	-	-	-	-
GP-2W	05/20/98	19	72	29	72	11,000	6,500	4,800	<250	-	-
GP-3W	05/20/98	2.5	1.1	<0.5	<0.6	470	55	-	-	-	-
GP-4W	05/20/98	0.5	2.4	11	43	1,400	2,500	-	-	-	-
Soil Boring Water Samples											
SB-1W	09/17/99	<0.3	<0.3	<0.3	<0.6	121	<5	<20	<5	-	-
SB-2W	09/17/99	0.78	1.16	<0.3	1.17	<50	6.93	6.79	<5	-	-
SB-3W	09/17/99	1.12	<0.3	0.53	1.68	105	<5	<20	<5	-	-
SB-4W	09/17/99	<0.3	3.65	0.85	4.6	781	<5	<20	<5	-	-
SB-5W	09/17/99	<0.3	0.5	<0.3	<0.6	199	5.57	5.61	<20	<5	-
Monitoring Well Samples											
MW-1	03/19/99	<0.3	<0.3	<0.3	<0.6	185	-	33.6	<20	10.4	1.5
	05/31/99	<0.3	<0.3	<0.3	<0.6	465	-	105	<20	18.6	1.0
	09/15/99	1.55	0.38	0.48	1.43	254	56.4	47.9	<20	14.5	-
	12/14/99	1.31	0.93	1.32	<0.6	351	51.6	34.7	<20	23.2	1.6
	03/01/00	<0.3	<0.3	<0.3	<0.6	249	10.9	13.2	<20	<5	a
	03/29/00	-	--	--	--	-	-	-	-	-	1.7
	06/05/00	<0.5	<0.5	<0.5	<1	140	-	29	<50	7.8	1.7
	09/18/00	<0.5	<0.5	<0.5	<1	360	-	55	<120	26	1.7
	12/04/00	<0.5	<0.5	<0.5	<1.5	180	-	21	<120	18	1.7
	03/12/01	<0.5	<0.5	<0.5	<1	120	-	13	<50	<2	1.7
	06/05/01	0.7	<0.5	<0.5	1	170	-	56	<50	20	1.7
	09/21/01	<0.5	<0.5	<0.5	<0.5	<50	-	130	23	26	1.7
	12/05/01	<0.5	<0.5	<0.5	<0.5	<50	-	14	<20	7.4	1.7
	03/01/02	<0.5	<0.5	<0.5	<0.5	<50	-	36	<20	18	1.7
	06/06/02	<0.5	<0.5	<0.5	<0.5	180	35	31	<10	13	1.7
	09/06/02	<0.5	0.85	<0.5	<0.5	190	27	27	7.4	13	1.7
	11/22/02	<0.5	<0.5	<0.5	<0.5	400	-	13	<5	<5	1.7
	03/26/03	<0.50	<0.50	<0.50	<0.50	870	-	34	<5.0	<5.0	c
	06/02/03	<0.50	<0.50	<0.50	<0.50	850	-	53	6.4	11	c
	09/02/03	<0.50	<0.50	<0.50	<0.50	730	-	25	<5.0	<5.0	b,c
	12/22/03	<0.50	<0.50	<0.50	<0.50	640	-	9.9	<5.0	<5.0	c
	03/10/04	<0.50	<0.50	<0.50	<0.50	380	-	24	<5.0	<5.0	c
	06/16/04	-	--	--	--	-	-	-	-	-	c
	09/27/04	<0.50	<0.50	<0.50	<0.50	460	-	22	<5.0	19	d
	12/15/04	<0.50	<0.50	<0.50	<0.50	590	-	15	<5.0	<5.0	c
	03/21/05	<0.50	<0.50	<0.50	<0.50	610	-	16	<5.0	4.4	e

Table 2
Historical Groundwater Monitoring and Analytical Data

7-Eleven Store #20244
1625 MacDonald Avenue
Richmond, CA

Well ID/ Elevation (TOC)	Date	Ethyl- Benzene	Toluene	Xylene	MIBE	NIBE	TBA	DPE	EDE	TAME	1,2-DCA	Notes	Dissolved Oxygen (mg/L)	DTW SPT (feet)	HTE (feet)				
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(feet)	(feet)				
MW-2	03/19/99	<0.3	<0.3	<0.3	384	—	83.9	<20	<5	<5	—	—	1.8	10.16	0.00	49.49			
	05/31/99	<0.3	<0.3	<0.3	578	—	262	<80	<20	<20	—	—	1.7	12.60	0.00	47.05			
	09/15/99	1.75	0.44	1.06	362	271	335	<20	<5	<5	—	—	—	14.44	0.00	45.21			
	12/14/99	1.03	0.57	1.05	566	296	296	<40	<10	<10	<2	<2	1.8	20.04	0.00	39.61			
	03/01/00	<0.3	<0.3	<0.3	434	63.3	71	<20	<5	<5	—	—	8.10	0.00	51.55				
	03/29/00	—	—	—	—	—	—	—	—	—	—	—	—	10.48	0.00	49.17			
	06/05/00	<5	<5	<5	400	—	500	<500	<20	<20	—	—	—	1.5	12.33	0.00	47.32		
	09/18/00	<0.5	<0.5	<1	920	—	800	<620	<25	<25	—	—	—	14.16	0.00	45.49			
	12/04/00	<0.5	<0.5	<1.5	480	—	400	<620	<25	<25	—	—	—	14.37	0.00	45.28			
	03/12/01	<0.5	<0.5	<1	300	—	150	<100	<2	<4	—	—	—	0.7	10.12	0.00	49.53		
	06/05/01	1.5	<1	1.9	440	—	410	<250	<10	<10	—	—	—	0.8	13.85	0.00	45.80		
	09/21/01	1.6	0.67	<0.5	52	<50	—	390	<100	<25	—	—	—	0.5	15.52	0.00	44.13		
	12/05/01	<0.5	<0.5	<0.5	50	<50	—	130	<20	<5	—	—	—	1.0	11.50	0.00	48.15		
	03/01/02	<0.5	<0.5	<0.5	50	<50	—	180	<20	<5	—	—	—	1.2	11.75	0.00	47.90		
	06/06/02	<0.5	<0.5	<0.5	400	120	—	120	<25	<2.5	<2.5	—	—	—	13.18	0.00	46.47		
	09/06/02	<0.5	<0.5	<0.5	390	93	130	—	—	—	—	—	—	—	14.64	0.00	45.01		
	11/22/02	<0.5	<0.5	<0.5	670	—	78	<5	1.3	<0.5	<0.5	—	—	—	0.9	14.80	0.00	44.85	
	03/26/03	<0.50	<0.50	<0.50	1,800	—	45	<5.0	0.98	<0.50	<0.50	—	—	—	0.4	11.74	0.00	47.91	
	06/02/03	<0.50	<0.50	<0.50	1,800	—	39	<5.0	0.96	<0.50	<0.50	—	—	—	1.6	12.56	0.00	47.09	
	09/02/03	<0.50	<0.50	<0.50	1,300	—	44	<5.0	1.6	<0.50	<0.50	—	—	—	b,c	0.4	13.99	0.00	45.66
	12/22/03	<0.50	<0.50	<0.50	1,100	—	26	<5.0	0.84	<0.50	<0.50	—	—	—	c	0.5	12.03	0.00	47.62
	03/10/04	<0.50	<0.50	<0.50	1,100	—	18	<5.0	0.83	<0.50	<0.50	—	—	—	c	0.4	10.49	0.00	49.16
	06/16/04	<0.50	<0.50	<0.50	1,300	—	19	<5.0	0.61	<0.50	<0.50	—	—	—	c	0.6	13.57	0.00	46.08
	09/27/04	<0.50	<0.50	<0.50	1,290	—	20	<5.0	1.5	<0.50	<0.50	—	—	—	c	0.2	14.76	0.00	44.89
	12/15/04	<0.50	<0.50	<0.50	1,600	—	14	<5.0	0.72	<0.50	<0.50	—	—	—	c	1.1	11.97	0.00	47.68
	03/21/05	<0.50	<0.50	<0.50	2,300	—	14	<5.0	0.79	<0.50	<0.50	—	—	—	c,b	1.8	10.25	0.00	49.40

Table 2
Historical Groundwater Monitoring and Analytical Data

7-Eleven Store #20244
 3675 MacDonald Avenue
 Richmond, CA

Well ID [TOC]	Date	Elevation [feet]	Benzene [µg/L]	Toluene [µg/L]	Ethyl Benzene [µg/L]	Xylene [µg/L]	TPHg [µg/L]	MME [µg/L]	MME [µg/L]	TBA [µg/L]	DPE [µg/L]	E(BE) [µg/L]	TAME [µg/L]	1,2-DCA [µg/L]	EDB [µg/L]	Notes	Dissolved Oxygen [mg/L]	DTW [feet]	SPT [feet]	HTE [feet]
MW-3	03/19/99	696	786	552	777	62,400	-	84,400	<8,000	<2,000	<2,000	-	-	-	-	1.0	10.73	0.00	48.86	
	05/31/99	664	406	435	402	39,200	-	92,800	<20,000	<5,000	<5,000	-	-	-	-	1.2	12.91	0.00	46.68	
	09/15/99	386	104	263	206	34,100	65,200	80,100	<8,000	<2,000	<2,000	-	-	-	-	14.54	0.00	45.05		
	12/14/99	515	<30	310	67	27,600	97,000	81,900	<10,000	<2,500	<2,500	<500	<500	<500	<500	1.9	20.03	0.00	39.56	
	03/01/00	701	744	509	927	47,300	63,300	59,100	<2,000	<500	<500	-	-	-	-	2.0	11.24	0.00	48.35	
	03/29/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.58	0.00	49.01	
	06/05/00	770	74	120	<10	15,000	-	54,000	<50,000	<2,000	<2,000	-	-	-	-	1.7	11.88	0.00	47.71	
	09/18/00	300	<5	110	<10	23,000	-	47,000	<50,000	<2,000	<2,000	-	-	-	-	0.3	15.38	0.00	44.21	
	12/04/00	490	13	360	86	22,000	-	42,000	<50,000	<2,000	<2,000	-	-	-	-	0.5	14.32	0.00	45.27	
	03/12/01	370	95	180	180	17,000	-	52,000	<50,000	<2	<2,000	-	-	-	-	0.7	11.20	0.00	48.39	
	06/05/01	310	<12	100	<25	17,000	-	47,000	<62,000	<2,500	<2,500	-	-	-	-	0.5	14.46	0.00	45.13	
	09/21/01	240	<10	120	<10	9,900	-	69,000	<10,000	<2,500	<2,500	-	-	-	-	0.4	15.57	0.00	44.02	
	12/05/01	430	<5	310	19	6,100	-	75,000	<10,000	<2,500	<2,500	-	-	-	-	0.9	12.10	0.00	47.49	
	03/01/02	580	270	390	<10	11,000	-	35,000	<10,000	<2,500	<2,500	-	-	-	-	1.1	12.42	0.00	47.17	
	06/05/02	510	76	370	24	7,500	40,000	37,000	<10,000	<1,000	<1,000	-	-	-	-	13.70	0.00	45.89		
	09/06/02	340	33	220	<10	2,900	36,000	43,000	<10,000	<1,000	<1,000	-	-	-	-	1.0	14.78	0.00	44.81	
	11/22/02	330	<50	210	<50	<5,000	-	35,000	840	<50	<50	-	-	-	-	0.9	14.93	0.00	44.66	
	03/26/03	490	<100	310	<100	<10,000	-	47,000	<1,000	<100	<100	-	-	-	-	0.2	11.99	0.00	47.60	
	06/02/03	400	<100	290	<100	<10,000	-	41,000	<1,000	<100	<100	-	-	-	-	0.3	12.71	0.00	46.88	
	09/02/03	160	<100	<100	<100	<10,000	-	43,000	<1,000	<100	<100	-	-	-	-	0.2	14.16	0.00	45.43	
	12/22/03	270	<50	130	<50	<5,000	-	34,000	<500	<50	<50	-	-	-	-	0.5	12.34	0.00	47.25	
	03/10/04	380	6.0	280	21	4,700	-	42,000	860	1.2	12	42	-	-	-	d	0.2	11.83	0.00	47.76
	06/16/04	360	<100	260	<100	<10,000	-	38,000	<1,000	<100	<100	-	-	-	-	0.5	13.80	0.00	45.79	
	09/27/04	340	<50	360	<50	<50,000	-	25,000	7,600	<50	<50	-	-	-	-	0.1	14.95	0.00	44.64	
	12/15/04	310	<50	270	76	5,300	-	18,000	6,200	<50	<50	-	-	-	-	0.9	12.28	0.00	47.31	
	03/21/05	120	<50	200	61	<5,000	-	18,000	950	<50	<50	-	-	-	-	7.2	10.25	0.00	49.34	

Table 2
Historical Groundwater Monitoring and Analytical Data

7-Eleven Store #20244
3625 MacDonald Avenue
Richmond, CA

Well ID/ Elevation (TOC)	Date	Benzene		Toluene		Xylene		TPHg		MBE 3020.		TAME		1,1,2-TCA		Dissolved Oxygen		DTW		SFT (feet)		WTE (feet)	
		[µg/L]	[µg/L]	[µg/L]	[µg/L]	[µg/L]	[µg/L]	[µg/L]	[µg/L]	[µg/L]	[µg/L]	[µg/L]	[µg/L]	[µg/L]	[mg/L]	[mg/L]	[feet]	[feet]	[feet]	[feet]	[feet]	[feet]	
MW-4	09/21/01	3.3	<0.5	2.4	0.84	210	-	1,100	<100	<25	<25	<5	<5	<5	0.7	0.7	16.10	0.00	43.10				
	12/05/01	<0.5	<0.5	0.65	0.65	92	-	<5	<20	<5	<5	<5	<5	<5	0.7	0.7	13.55	0.00	45.65				
	03/01/02	<0.5	<0.5	<0.5	<0.5	<50	-	<5	<20	<5	<5	<5	<5	<5	0.9	0.9	13.73	0.00	45.47				
	06/06/02	<0.5	<0.5	<0.5	<0.5	<50	<5	0.62	<5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	14.50	0.00	44.70				
	09/06/02	<0.5	<0.5	<0.5	<0.5	<50	<5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	1.0	1.0	15.35	0.00	43.85				
	11/22/02	<0.5	<0.5	<0.5	<0.5	<50	<5	0.64	<5	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	1.3	15.42	0.00	43.78				
	03/26/03	<0.50	<0.50	<0.50	<0.50	<50	<50	0.93	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	b	b	13.58	0.00	45.62				
	06/02/03	<0.50	<0.50	<0.50	<0.50	<50	<50	1.1	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	b	b	14.23	0.00	44.97				
	09/02/03	<0.50	<0.50	<0.50	<0.50	<50	<50	1.6	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	b	b	14.74	0.00	44.46				
	12/22/03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	03/10/04	<0.50	<0.50	<0.50	<0.50	<50	<50	0.89	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	c	c	12.99	0.00	46.21				
MW-5	06/16/04	<0.50	<0.50	<0.50	<0.50	<50	<50	1.9	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	d	d	14.91	0.00	44.29				
	09/27/04	<0.50	<0.50	<0.50	<0.50	<50	<50	72	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	e	e	15.61	0.00	43.59				
	12/15/04	<0.50	<0.50	<0.50	<0.50	<50	<50	0.59	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	d	d	13.90	0.00	45.30				
	03/21/05	<0.50	<0.50	<0.50	<0.50	<50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	e	e	12.65	0.00	46.55				
	09/21/01	1.1	0.52	1.4	1.6	<50	-	<5	<20	<5	<5	<5	<5	<5	-	-	0.5	0.5	15.35	0.00	43.59		
	12/05/01	<0.5	<0.5	<0.5	<0.5	<50	-	<5	<20	<5	<5	<5	<5	<5	-	-	1.1	1.1	12.60	0.00	46.34		
	03/01/02	<0.5	<0.5	<0.5	<0.5	<50	-	<5	<20	<5	<5	<5	<5	<5	-	-	1.0	1.0	12.43	0.00	46.51		
	06/06/02	<0.5	<0.5	<0.5	<0.5	<50	<5	0.65	<5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	13.40	0.00	45.54				
	09/06/02	<0.5	<0.5	<0.5	<0.5	<50	<5	0.53	<5	<0.5	<0.5	<0.5	<0.5	<0.5	1.0	1.0	14.50	0.00	44.44				
	11/22/02	<0.5	<0.5	<0.5	<0.5	<50	<5	0.75	<5	<0.5	<0.5	<0.5	<0.5	<0.5	d	d	14.92	0.00	44.02				
	03/26/03	<0.50	<0.50	<0.50	<0.50	<50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	d	d	12.20	0.00	46.74				
	06/02/03	<0.50	<0.50	<0.50	<0.50	<50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	d	d	3.4	3.4	12.96	0.00	45.98		
	09/02/03	<0.50	<0.50	<0.50	<0.50	<50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	d	d	0.7	0.7	13.93	0.00	45.01		
	12/22/03	<0.50	<0.50	<0.50	<0.50	<50	<50	<0.79	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	-	-	0.5	0.5	15.35	0.00	43.59		
	03/10/04	<0.50	<0.50	<0.50	<0.50	<50	<50	<0.72	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	d	d	0.3	0.3	12.61	0.00	46.33		
	06/16/04	<0.50	<0.50	<0.50	<0.50	<50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	d	d	0.3	0.3	11.26	0.00	47.68		
	09/27/04	<0.50	<0.50	<0.50	<0.50	<50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	d	d	0.7	0.7	13.79	0.00	45.15		
	12/15/04	<0.50	<0.50	<0.50	<0.50	<50	<50	<0.56	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	d	d	0.2	0.2	14.87	0.00	44.07		
	03/21/05	<0.50	<0.50	<0.50	<0.50	<50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	d	d	2.3	2.3	12.40	0.00	46.54		

Table 2
Historical Groundwater Monitoring and Analytical Data

7-Eleven Store #20244
3625 MacDonald Avenue
Richmond, CA

Well ID/ Elevation (TOC)	Date	Benzene	Toluene	Ethyl Benzene	MIBE	TPHg	MIBE	TBA	DPE	EtBE	TAME	1,2- DCA	Dissolved Oxygen	DTW	SPT	WTE (feet)
		($\mu\text{g/L}$)	(mg/L)	(feet)	(feet)	(feet)										
Explanation																
TPHg = Total petroleum hydrocarbons-as-gasoline																
MIBE = Methyl-tert-butyl ether																
TBA = Tert-butanol																
DPE = Diisopropyl ether																
EIBE = Ethyl-tert-butyl ether																
TAME = Tert-amyl-methyl ether																
1,2-DCA = 1,2-dichloroethane																
EDB = 1,2-dibromoethane																
DTW = Depth to water																
SPT = Separate-phase hydrocarbon thickness																
WTE = Water table elevation																
TOC = Top of casing elevation in feet above mean sea level																
Notes																
a = Historical data prior to 03/26/03 sample date provided by Shaw E&I.																
Samples analyzed using EPA Method 8260B starting with 03/26/03 sample date.																
b = Suspected malfunction of gauging probe on 03/01/00; wells regauged 03/29/00.																
c = Matrix Spike/Matrix Spike Duplicate Results for MIBE were affected by the analyte concentration already present in the un-spiked sample.																
d = Hydrocarbons reported as TPHg do not exhibit a typical Gasoline chromatographic pattern.																
e = TBA may be biased slightly high. A fraction of MIBE (typically less than 1%) converts to TBA during the analysis of water samples. Kff considers this conversion effect to be mathematically significant in samples that contain MIBE/TBA in ratios of over 20:1.																
f = Matrix Spike/Matrix Spike Duplicate Results for the analyte Benzene were affected by the analyte concentration already present in the un-spiked sample.																

Table 3
Soil Boring and Well Construction Details

7-Eleven Store #20244
3625 MacDonald Avenue
Richmond, California

Well ID	Drill Date	Well Name	Depth (feet bgs)	Diameter (inches)	Top (feet bgs)	Bottom (feet bgs)	Screen Length (feet)	Comments
Soil Borings								
GP-1	05/20/98	21	21	1.5	--	--	--	Geoprobe boring
GP-2	05/20/98	21	21	1.5	--	--	--	Geoprobe boring
GP-3	05/20/98	16	16	1.5	--	--	--	Geoprobe boring
GP-4	05/20/98	18	18	1.5	--	--	--	Geoprobe boring
SB-1	09/17/99	19.5	19.5	1.5	--	--	--	Soil boring
SB-2	09/17/99	20	20	1.5	--	--	--	Soil boring
SB-3	09/17/99	28	28	1.5	--	--	--	Soil boring
SB-4	09/17/99	20	20	1.5	--	--	--	Soil boring
SB-5	09/17/99	20	20	2	--	--	--	Soil boring
SB-6	09/17/99	24	24	2	--	--	--	Soil boring
Monitoring Wells								
MW-1	01/22/99	20	20	2	5	20	15	
MW-2	01/22/99	20	20	2	5	20	15	
MW-3	01/22/99	20	20	2	5	20	15	
MW-4	08/24/01	24.5	24.5	2	14.5	24.5	10	
MW-5	08/24/01	24.5	24.5	2	14.5	24.5	10	
Oxygen Injection Wells								
I-1	12/15/04	27	27	0.75	24.5	27	2.5	Ceramic steel diffusion tip
I-2	12/14/04	27	27	0.75	24.5	27	2.5	Ceramic steel diffusion tip
I-3	12/14/04	27	27	0.75	24.5	27	2.5	Ceramic steel diffusion tip
Explanation								
Wells are of poly-vinyl-chloride (PVC) construction								
bgs = Below ground surface								

Table 4
Oxygen Injection Summary

7-Eleven Store #20244
3625 MacDonald Avenue
Richmond, California

Well Number	Date of Injection	Oxygen Injection Data				Comments		
		Oxygen Volume Injected (ft ³)	Mass Injected (pounds)	Length of Injection (hours)	Cumulative Mass Oxygen Injected (pounds)			
I-1	01/11/05	150	13.4	1.0	13.4	I-1 Injected Alone		
	01/25/05	150	13.4	1.0	26.7	I-1 Injected Alone		
	02/08/05	150	13.4	1.0	40.1	I-1 and I-2 Injected Simultaneously		
	02/23/05	150	13.4	1.0	53.4	I-1, I-2 and I-3 Injected Simultaneously		
	03/08/05	150	13.4	1.0	66.8	I-1, I-2 and I-3 Injected Simultaneously		
	03/22/05	150	13.4	1.0	80.1	I-1, I-2 and I-3 Injected Simultaneously		
I-2	01/11/05	150	13.4	1.0	13.4	I-2 Injected Alone		
	01/25/05	150	13.4	1.0	26.7	I-2 Injected Alone		
	02/08/05	150	13.4	1.0	40.1	I-1 and I-2 Injected Simultaneously		
	02/23/05	150	13.4	1.0	53.4	I-1, I-2 and I-3 Injected Simultaneously		
	03/08/05	150	13.4	1.0	66.8	I-1, I-2 and I-3 Injected Simultaneously		
	03/22/05	150	13.4	1.0	80.1	I-1, I-2 and I-3 Injected Simultaneously		
I-3	01/11/05	150	13.4	0.8	13.4	I-3 Injected Alone		
	01/25/05	150	13.4	1.0	26.7	I-3 Injected Alone		
	02/08/05	150	13.4	0.8	40.1	I-3 Injected Alone		
	02/23/05	150	13.4	1.0	53.4	I-1, I-2 and I-3 Injected Simultaneously		
	03/08/05	150	13.4	1.0	66.8	I-1, I-2 and I-3 Injected Simultaneously		
	03/22/05	150	13.4	1.0	80.1	I-1, I-2 and I-3 Injected Simultaneously		
<u>Explanation</u>		240.3	Total Pounds Oxygen Injected					
Dissolved Oxygen concentration measured using downhole meter								
ft ³ = cubic feet								
1 ft ³ O ₂ = 0.089 lb of O ₂								

Table 5
Dissolved Oxygen Summary

7-Eleven Store #20244
3625 MacDonald Avenue
Richmond, California

Well ID	Date of Injection	Dissolved Oxygen		Comments			
		Pre-Injection (mg/L)	Post Injection (mg/L)				
Dissolved Oxygen Monitoring Wells							
MW-1	01/11/05	2.4	3.8	Oxygen Injection Event			
	01/12/05	—	4.2				
	01/25/05	2.5	3.8	Oxygen Injection Event			
	01/26/05	—	3.7				
	02/08/05	2.6	3.9	Oxygen Injection Event			
	02/23/05	1.2	3.1	Oxygen Injection Event			
	03/08/05	1.8	3.8	Oxygen Injection Event			
	03/22/05	2.6	3.4	Oxygen Injection Event			
MW-2	01/11/05	2.7	3.7	Oxygen Injection Event			
	01/12/05	--	3.9				
	01/25/05	3.0	4.2	Oxygen Injection Event			
	01/26/05	--	4.4				
	02/08/05	3.4	4.4	Oxygen Injection Event			
	02/23/05	1.8	3.8	Oxygen Injection Event			
	03/08/05	2.0	4.0	Oxygen Injection Event			
	03/22/05	2.4	4.0	Oxygen Injection Event			
MW-3	01/11/05	2.5	7.0	Oxygen Injection Event			
	01/12/05	—	2.0				
	01/25/05	4.1	8.2	Oxygen Injection Event			
	01/26/05	—	7.8				
	02/08/05	8.0	17.6	Oxygen Injection Event			
	02/23/05	2.9	14.9	Oxygen Injection Event			
	03/08/05	3.3	16.0	Oxygen Injection Event			
	03/22/05	7.0	16.6	Oxygen Injection Event			
MW-4	01/11/05	3.6	—	Oxygen Injection Event			
	01/12/05	—	4.2				
	01/25/05	3.0	—	Oxygen Injection Event			
	01/26/05	—	3.8				
	02/08/05	3.0	3.0	Oxygen Injection Event			
	02/23/05	1.6	—	Oxygen Injection Event			
	03/08/05	1.2	—	Oxygen Injection Event			
	03/22/05	2.2	--	Oxygen Injection Event			
MW-5	01/11/05	2.4	—	Oxygen Injection Event			
	01/12/05	—	2.6				
	01/25/05	2.4	—	Oxygen Injection Event			
	01/26/05	—	2.8				
	02/08/05	2.2	2.2	Oxygen Injection Event			
	02/23/05	0.8	—	Oxygen Injection Event			
	03/08/05	0.8	—	Oxygen Injection Event			
	03/22/05	2.0	—	Oxygen Injection Event			
<u>Explanation</u>							
Dissolved Oxygen concentration measured using downhole meter							
mg/L = milligrams per liter							
-- = Not measured							

**ATTACHMENT A
MONITORING AND SAMPLING FIELD NOTES**

Quarterly Groundwater Monitoring
Report - First Quarter 2005
7-Eleven Store #20244
3625 MacDonald Avenue
Richmond, California

JOB NAME:	7-Eleven Store #20244	JOB NUMBER:	77EL.20244.05.0702
SITE ADDRESS:	3625 MacDonald Avenue	START DATE:	
	Richmond, CA	DATE PREPARED:	12/14/04
PREPARED FOR:	Peng Vang	PREPARED BY:	Tom Miller

SITE VISITATION REPORT

Name(s) Peng Vang
Arrival Time: 1:00
Weather Notations: SUN

Date: 3-21-05
"Departure Time:
CLOUDY RAIN SNOW

Yes No
Daniel Davis
Temperature 63 F

DRUM INVENTORY

<u>1</u>	WATER SOIL	<u>0</u>	CARBON EMPTY	TOTAL OPEN TOP TOTAL BUNG TOP	<u>1</u>
----------	---------------	----------	-----------------	----------------------------------	----------

HEALTH AND SAFETY ASSESSMENT

Traffic - moderate to low - set up delimiters for visibility & safety. Watched for foot traffic.

CALIBRATION

Ec	Calibration Reading	<u>14.13</u>
pH	Two Pt Calibration:	Reading 1 <u>7.01</u> Reading 2 <u>4.01</u>

DO Calibration

Pre-Calibration reading	Calibration Reading	Post Calibration Reading
Post M&S Agitated Water reading		

DESCRIPTION OF ACTIVITIES ONSITE AND NOTES

Arrived on site @ 1:00.

Check in with store Manager. Review HASP.

Locate & open all wells.

Decom & calibrate equipment.

Gauge wells & record DTB-DTW.

Before purge get DO readings.

Purge well & monitor pH, ec, temp.

Grab samples & label with well ID.

Transfer water to drum on site.

Decom & left site.

JOB NAME:	7-Eleven Store #20244	JOB NUMBER:	77EL.20244.05.0702
SITE ADDRESS:	3625 MacDonald Avenue	START DATE:	
	Richmond, CA	DATE PREPARED:	12/14/04
PREPARED FOR:	Peng Vang	PREPARED BY:	Tom Miller

GROUNDWATER GAUGING FORM

MEASURED TO TOC OR GRADE?

Top of Casing

WELL #	CONV DTB	WELL DTB	WEBS DTB	DRAW	GAUGED DTB	DTB PT	DTB (in.)	TOP RECHG	FLBY WATER	COMMENTS
MW-4	25	2"	59.20	12.65	24.20		2.4			
MW-5	25	2"	58.94	10.83	24.43		1.9			
MW-1	20	2"	59.86	10.30	19.90		2.8			
MW-2	20	2"	59.65	10.25	20.11		1.8			
MW-3	20	2"	59.59	10.25	20.18		7.2			
Estimated Purge Water Volume						27 gallons		0.56 Drums		

Please verify DTB in "Gauged DTB" column.

SECOR International Inc.

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 7-Eleven Store #20244 PURGED BY: Peng Vang WELL I.D.: MW- 4
CLIENT NAME: 7-Eleven, Inc. SAMPLED BY: Peng Vang SAMPLE I.D.: MW- 4
LOCATION: 3625 MacDonald Avenue, Richmond, CA QA SAMPLES: None

DATE PURGED 3-21-05 START (2400hr) 1130 END (2400hr) 1146

DATE SAMPLED 3-21-05 SAMPLE TIME (2400hr) 1200

SAMPLE TYPE: Groundwater X Surface Water _____ Treatment Effluent _____ Other _____

CASING DIAMETER: 2" X (0.17) 3" (0.38) 4" (0.67) 5" (1.02) 6" (1.50) 8" (2.60) Other ()

DEPTH TO BOTTOM (feet) = 24.2 Casing Volume (gal) = 2.0

DEPTH TO WATER (feet) = 12.65 CALCULATED PURGE (gal) = 6.0

WATER COLUMN HEIGHT (feet) = 11.55 ACTUAL PURGE (gal) = _____

FIELD MEASUREMENTS

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 12.71 SAMPLE TURBIDITY: 1.00

80% RECHARGE: YES NO ANALYSES: BTEX, TPIIg, 5 Oxygenates Via EPA 8260B

ODOR: *SO* SAMPLE VESSEL / PRESERVATIVE: HCL

PURGING EQUIPMENT

<input type="checkbox"/> Bladder Pump	<input type="checkbox"/> Baileyer (Teflon)
<input type="checkbox"/> Centrifugal Pump	<input type="checkbox"/> Baileyer (PVC)
<input checked="" type="checkbox"/> Submersible Pump	<input type="checkbox"/> Baileyer (Stainless Steel)
<input type="checkbox"/> Peristaltic Pump	<input type="checkbox"/> Dedicated

Other:

Pump Depth:

SAMPLING EQUIPMENT

Bladder Pump Bailer (Teflon)
 Centrifugal Pump Bailer (PVC or disposable)
 Submersible Pump Bailer (Stainless Steel)
 Peristaltic Pump Dedicated

Other:

WELL INTEGRITY: *good*

LOCK#: 1175

REMARKS: DD - 24

[View Details](#) | [Edit](#) | [Delete](#)

SIGNATURE:  Page _____ of _____

SECOR International Inc.

PROJECT #: 7-Eleven Store #20244 PURGED BY: Peng Vang WELL I.D.: MW- 5
CLIENT NAME: 7-Eleven, Inc. SAMPLED BY: Peng Vang SAMPLE I.D.: MW- 5
LOCATION: 3625 MacDonald Avenue, Richmond, CA QA SAMPLES: None

DATE PURGED	3-21-05	START (2400hr)	1215	END (2400hr)	1232		
DATE SAMPLED	3-21-05	SAMPLE TIME (2400hr)	1245				
SAMPLE TYPE:	Groundwater <input checked="" type="checkbox"/>	Surface Water		Treatment Effluent			
CASING DIAMETER:	2" <input checked="" type="checkbox"/>	3" <input type="checkbox"/>	4" <input type="checkbox"/>	5" <input type="checkbox"/>	6" <input type="checkbox"/>	8" <input type="checkbox"/>	Other <input type="checkbox"/>
Casing Volume: (gallons per foot)	(0.17)	(0.38)	(0.67)	(1.02)	(1.50)	(2.60)	()
DEPTH TO BOTTOM (feet) =	24.43	CASING VOLUME (gal) =				2.5	
DEPTH TO WATER (feet) =	10.83	CALCULATED PURGE (gal) =				7.5	
WATER COLUMN HEIGHT (feet) =	13.40	ACTUAL PURGE (gal) =				7.7	

FIELD MEASUREMENTS

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 10.88 SAMPLE TURBIDITY: Low

80% RECHARGE: YES NO **ANALYSES:** BTEX, TPHg, 5 Oxygenates Via EPA 8260B

ODOR: D SAMPLE VESSEL / PRESERVATIVE: HCL

ODOR: D SAMPLE VESSEL / PRESERVATIVE: HCL

PURGING EQUIPMENT

<input type="checkbox"/> Bladder Pump	<input type="checkbox"/> Bailer (Teflon)
<input type="checkbox"/> Centrifugal Pump	<input type="checkbox"/> Bailer (PVC)
<input checked="" type="checkbox"/> Submersible Pump	<input type="checkbox"/> Bailer (Stainless Steel)
<input type="checkbox"/> Peristaltic Pump	<input type="checkbox"/> Dedicated

Other:

Pump Depth:

SAMPLING EQUIPMENT

Bladder Pump Bailer (Teflon)
 Centrifugal Pump Bailer (PVC or disposable)
 Submersible Pump Bailer (Stainless Steel)
 Peristaltic Pump Dedicated

Other:

WELL INTEGRITY: *OK*

LOCK#: V-13

REMARKS: $R_0 = 1.9^{\circ}$

[View Details](#) | [Edit](#) | [Delete](#)

SIGNATURE: Page 1 of 1

SECOR International Inc.

PROJECT #: 7-Eleven Store #20244 PURGED BY: Peng Vang WELL I.D.: MW- 1
CLIENT NAME: 7-Eleven, Inc. SAMPLED BY: Peng Vang SAMPLE I.D.: MW- 1
LOCATION: 3625 MacDonald Avenue, Richmond, CA QA SAMPLES: None

DATE PURGED 3-21-05 START (2400hr) 1256 END (2400hr) 1314
DATE SAMPLED 3-21-05 SAMPLE TIME (2400hr) 1325
SAMPLE TYPE: Groundwater X Surface Water _____ Treatment Effluent _____ Other _____

CASING DIAMETER: 2" X (0.17) 3" (0.38) 4" (0.67) 5" (1.02) 6" (1.50) 8" (2.60) Other ()

DEPTH TO BOTTOM (feet) =	19.90	CASING VOLUME (gal) =	2.0
DEPTH TO WATER (feet) =	10.30	CALCULATED PURGE (gal) =	6.0
WATER COLUMN HEIGHT (feet) =	9.60	ACTUAL PURGE (gal) =	6.2

FIELD MEASUREMENTS

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 10.35 SAMPLE IN SIGHT: L SAMPLE TURBIDITY: Low

80% RECHARGE: YES NO **ANALYSES:** BTEX, TPHg, 5 Oxygenates Via EPA 8260B

ODOR: *S* SAMPLE VESSEL / PRESERVATIVE: HCL

ODOR: ~~gasoline~~ SAMPLE VESSEL / PRESERVATIVE: HCL

PURGING EQUIPMENT

Bladder Pump Bail
 Centrifugal Pump Bail
 Submersible Pump Bail
 Peristaltic Pump Dedi

Other: _____

Pump Depth: _____

SAMPLING EQUIPMENT

Bladder Pump Bailer (Teflon)
 Centrifugal Pump Bailer (_____ PVC or disposable)
 Submersible Pump Bailer (Stainless Steel)
 Peristaltic Pump Dedicated

Other:

WELL INTEGRITY: good

REMARKS: $D_N = 0^{\circ} 2' 8''$

LOCK#; V75

SIGNATURE: P. V.

SECOR International Inc.

PROJECT #: 7-Eleven Store #20244 PURGED BY: Peng Yang WELL I.D.: MW- 2
CLIENT NAME: 7-Eleven, Inc. SAMPLED BY: Peng Yang SAMPLE I.D.: MW- 2
LOCATION: 3625 MacDonald Avenue, Richmond, CA QA SAMPLES: None

DATE PURGED 3-21-05 START (2400hr) 1334 END (2400hr) 1355

DATE SAMPLED 3-21-05 SAMPLE TIME (2400hr) 1407

SAMPLE TYPE: Groundwater X Surface Water _____ Treatment Effluent _____ Other _____

CASING DIAMETER: 2" X (0.17) 3" (0.38) 4" (0.67) 5" (1.02) 6" (1.50) 8" (2.60) Other ()

DEPTH TO BOTTOM (feet) = 20.11 Casing Volume (gal) = 2.0

DEPTH TO WATER (feet) = 10.25 CALCULATED PURGE (gal) = 1.10

WATER COLUMN HEIGHT (feet) = 9.86 ACTUAL PURGE (gal) = 6.1

FIELD MEASUREMENTS

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 10.31 SAMPLE TURBIDITY: 6.0

SAMPLE TURBIDITY: 6 NTU

80% RECHARGE: YES NO **ANALYSES:** BTEX, TP11g, 5 Oxygenates Via EPA 8260B

ODOR: *Odorless* **SAMPLE VESSEL / PRESERVATIVE:** *Plastic vial / HCl*

PURGING EQUIPMENT **SHUT DOWN VESSELS PRESERVATIVE: ICE**

PURGING EQUIPMENT

<input type="checkbox"/> Bladder Pump	<input type="checkbox"/> Baileyer (Teflon)
<input type="checkbox"/> Centrifugal Pump	<input type="checkbox"/> Baileyer (PVC)
<input checked="" type="checkbox"/> Submersible Pump	<input type="checkbox"/> Baileyer (Stainless Steel)
<input type="checkbox"/> Peristaltic Pump	<input type="checkbox"/> Dedicated

Other:

SAMPLING EQUIPMENT

Bladder Pump Bailier (Teflon)
 Centrifugal Pump Bailier (PVC or disposable)
 Submersible Pump Bailier (Stainless Steel)
 Peristaltic Pump Dedicated

Other:

WELL INTEGRITY: 8600

LOCK#: yes

REMARKS: Bo = 1.8

SIGNATURE: J. V. J.

SECOR International Inc.
WATER SAMPLE FIELD DATA SHEET

PROJECT #: 7-Eleven Store #20244 PURGED BY: Peng Vang WELL I.D.: MW- 3
CLIENT NAME: 7-Eleven, Inc. SAMPLED BY: Peng Vang SAMPLE I.D.: MW- 3
LOCATION: 3625 MacDonald Avenue, Richmond, CA QA SAMPLES: None

DATE PURGED 3-21-05 START (2400hr) 1420 END (2400hr) 1435

DATE SAMPLED 3-21-05 SAMPLE TIME (2400hr) 1437

SAMPLE TYPE: Groundwater X Surface Water _____ Treatment Effluent _____ Other _____

CASING DIAMETER: 2" X 3" (0.17) 4" (0.38) 5" (0.67) 6" (1.02) 8" (1.50) Other ()

DEPTH TO BOTTOM (feet) = 20.18 Casing Volume (gal) = 2.0

DEPTH TO WATER (feet) = 10.25 CALCULATED PURGE (gal) = 6.0

WATER COLUMN HEIGHT (feet) = 9.93 ACTUAL PURGE (gal) = 6.2

FIELD MEASUREMENTS

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 10.33 SAMPLE TURBIDITY: Low

80% RECHARGE: YES NO ANALYSES: BTEX, TPHg, 5 Oxygenates Via EPA 8260B

ODOR: *(Signature)* SAMPLE VESSEL / PRESERVATIVE: HCL

PURGING EQUIPMENT

— Bladder Pump	— Bailer (Teflon)
— Centrifugal Pump	— Bailer (PVC)
X Submersible Pump	— Bailer (Stainless Steel)
— Peristaltic Pump	— Dedicated

Other:

Pump Depth: _____

SAMPLING EQUIPMENT

Bladder Pump Bailier (Teflon)
 Centrifugal Pump Bailier (PVC or disposable)
 Submersible Pump Bailier (Stainless Steel)
 Peristaltic Pump Dedicated

Other:

WELL INTEGRITY: *and*

LOCK#: yes

REMARKS: $\overline{PQ} = 7.2$

SIGNATURE: P. V. Page _____ of _____

**ATTACHMENT B
CERTIFIED LABORATORY ANALYTICAL REPORTS
AND CHAIN-OF-CUSTODY DOCUMENTATION**

Quarterly Groundwater Monitoring
Report – First Quarter 2005
7-Eleven Store #20244
3625 MacDonald Avenue
Richmond, California



Report Number : 42953

Date : 3/29/2005

Debbie Herzog
SECOR International, Inc.
3017 Kilgore Road, Suite 100
Rancho Cordova, CA 95670

Subject : 5 Water Samples
Project Name : 7-Eleven Store #20244
Project Number : 77EL.20244.05

Dear Ms. Herzog,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

A handwritten signature in black ink, appearing to read "Joel Kiff".

Joel Kiff



Report Number : 42953

Date : 3/29/2005

Subject : 5 Water Samples
Project Name : 7-Eleven Store #20244
Project Number : 77EL.20244.05

Case Narrative

Matrix Spike/Matrix Spike Duplicate Results associated with samples MW-1, MW-2, MW-4, and MW-5 for the analyte Benzene were affected by the analyte concentrations already present in the un-spiked sample.

Hydrocarbons reported as TPH as Gasoline do not exhibit a typical Gasoline chromatographic pattern for sample MW-2 and MW-1.

Approved By:

A handwritten signature in black ink that reads "Joe Kiff". The signature is stylized with a large, sweeping loop on the left and two vertical lines on the right.

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800



Report Number : 42953

Date : 3/29/2005

Project Name : 7-Eleven Store #20244

Project Number : 77EL.20244.05

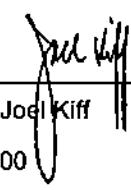
Sample : MW-1

Matrix : Water

Lab Number : 42953-01

Sample Date : 3/21/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Methyl-t-butyl ether (MTBE)	16	0.50	ug/L	EPA 8260B	3/25/2005
Diisopropyl ether (DIPE)	4.4	0.50	ug/L	EPA 8260B	3/25/2005
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	3/25/2005
TPH as Gasoline	610	50	ug/L	EPA 8260B	3/25/2005
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	3/25/2005
4-Bromofluorobenzene (Surr)	108		% Recovery	EPA 8260B	3/25/2005

Approved By: 
Joe Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800



Report Number : 42953

Date : 3/29/2005

Project Name : 7-Eleven Store #20244

Project Number : 77EL.20244.05

Sample : MW-2

Matrix : Water

Lab Number : 42953-02

Sample Date : 3/21/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	3/28/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	3/28/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	3/28/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	3/28/2005
Methyl-t-butyl ether (MTBE)	14	0.50	ug/L	EPA 8260B	3/28/2005
Diisopropyl ether (DIPE)	0.79	0.50	ug/L	EPA 8260B	3/28/2005
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	3/28/2005
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	3/28/2005
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	3/28/2005
TPH as Gasoline	2300	50	ug/L	EPA 8260B	3/28/2005
Toluene - d8 (Surr)	95.0		% Recovery	EPA 8260B	3/28/2005
4-Bromofluorobenzene (Surr)	104		% Recovery	EPA 8260B	3/28/2005

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800



Report Number : 42953

Date : 3/29/2005

Project Name : 7-Eleven Store #20244

Project Number : 77EL..20244.05

Sample : MW-3

Matrix : Water

Lab Number : 42953-03

Sample Date : 3/21/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	120	50	ug/L	EPA 8260B	3/25/2005
Toluene	< 50	50	ug/L	EPA 8260B	3/25/2005
Ethylbenzene	200	50	ug/L	EPA 8260B	3/25/2005
Total Xylenes	61	50	ug/L	EPA 8260B	3/25/2005
Methyl-t-butyl ether (MTBE)	18000	50	ug/L	EPA 8260B	3/25/2005
Diisopropyl ether (DIPE)	< 50	50	ug/L	EPA 8260B	3/25/2005
Ethyl-t-butyl ether (ETBE)	< 50	50	ug/L	EPA 8260B	3/25/2005
Tert-amyl methyl ether (TAME)	< 50	50	ug/L	EPA 8260B	3/25/2005
Tert-Butanol	950	250	ug/L	EPA 8260B	3/25/2005
TPH as Gasoline	< 5000	5000	ug/L	EPA 8260B	3/25/2005
Toluene - d8 (Surr)	91.6		% Recovery	EPA 8260B	3/25/2005
4-Bromofluorobenzene (Surr)	94.0		% Recovery	EPA 8260B	3/25/2005

Approved By: 

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800



Report Number : 42953

Date : 3/29/2005

Project Name : 7-Eleven Store #20244

Project Number : 77EL.20244.05

Sample : MW-4

Matrix : Water

Lab Number : 42953-04

Sample Date : 3/21/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	3/25/2005
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	3/25/2005
Toluene - d8 (Surrogate)	99.4		% Recovery	EPA 8260B	3/25/2005
4-Bromofluorobenzene (Surrogate)	104		% Recovery	EPA 8260B	3/25/2005

Approved By: Joe Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800



Report Number : 42953

Date : 3/29/2005

Project Name : 7-Eleven Store #20244

Project Number : 77EL.20244.05

Sample : MW-5

Matrix : Water

Lab Number : 42953-05

Sample Date : 3/21/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
DIsopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	3/25/2005
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	3/25/2005
Toluene - d8 (Surr)	98.9		% Recovery	EPA 8260B	3/25/2005
4-BromoFluorobenzene (Surr)	104		% Recovery	EPA 8260B	3/25/2005

Approved By: Joe Kiff

QC Report : Method Blank Data
 Project Name : 7-Eleven Store #20244
 Project Number : 77EL.20244.05

Report Number : 42953
 Date : 3/29/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	3/28/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	3/28/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	3/28/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	3/28/2005
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	3/28/2005
Diisopropyl ether (DIPPE)	< 0.50	0.50	ug/L	EPA 8260B	3/28/2005
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	3/28/2005
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	3/28/2005
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	3/28/2005
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	3/28/2005
Toluene - d8 (Surf)	91.8	%		EPA 8260B	3/28/2005
4-Bromofluorobenzene (Surf)	107	%		EPA 8260B	3/28/2005
Benzene	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Diisopropyl ether (DIPPE)	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	3/25/2005
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	3/25/2005
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	3/25/2005
Toluene - d8 (Surf)	99.7	%		EPA 8260B	3/25/2005
4-Bromofluorobenzene (Surf)	94.8	%		EPA 8260B	3/25/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed	Method Reporting Limit	Units	Analysis Method	Date Analyzed	
Benzene	< 0.50	0.50	ug/L	EPA 8260B	3/28/2005	< 0.50	0.50	ug/L	EPA 8260B	3/24/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	3/28/2005	< 0.50	0.50	ug/L	EPA 8260B	3/24/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	3/28/2005	< 0.50	0.50	ug/L	EPA 8260B	3/24/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	3/28/2005	< 0.50	0.50	ug/L	EPA 8260B	3/24/2005
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	3/28/2005	< 0.50	0.50	ug/L	EPA 8260B	3/24/2005
Diisopropyl ether (DIPPE)	< 0.50	0.50	ug/L	EPA 8260B	3/28/2005	< 0.50	0.50	ug/L	EPA 8260B	3/24/2005
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	3/28/2005	< 0.50	0.50	ug/L	EPA 8260B	3/24/2005
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	3/28/2005	< 0.50	0.50	ug/L	EPA 8260B	3/24/2005
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	3/28/2005	< 5.0	5.0	ug/L	EPA 8260B	3/24/2005
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	3/28/2005	< 50	50	ug/L	EPA 8260B	3/24/2005
Toluene - d8 (Surf)	99.7	%		EPA 8260B	3/28/2005	99.7	%		EPA 8260B	3/24/2005
4-Bromofluorobenzene (Surf)	94.8	%		EPA 8260B	3/28/2005	94.8	%		EPA 8260B	3/24/2005



Approved By:

KIFF ANALYTICAL, LLC

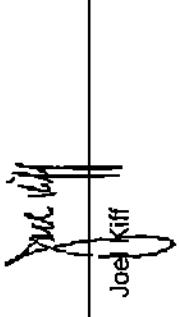
2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : 7-Eleven Store #20244
 Project Number : 77EL.20244.05

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Units	Analysis Method	Date Analyzed	Duplicate Spiked Sample Percent Recov.	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Spiked Sample Percent Recov.	Relative Percent Diff.	Relative Percent Diff.
Benzene	42952-10	830	40.0	40.0	825	76.4	ug/L	EPA 8260B	3/25/05	0.00	0.00	70.130	25	
Toluene	42952-10	78	40.0	40.0	123	119	ug/L	EPA 8260B	3/25/05	112	102	9.70	70.130	25
Tert-Butanol	42952-10	630	200	200	832	832	ug/L	EPA 8260B	3/25/05	102	102	0.0430	70.130	25
Methyl-t-Butyl Ether	42952-10	490	40.0	40.0	538	527	ug/L	EPA 8260B	3/25/05	127	99.2	24.6	70.130	25
Benzene	42953-02	<0.50	40.0	40.0	40.8	39.5	ug/L	EPA 8260B	3/25/05	102	98.8	3.08	70.130	25
Toluene	42953-02	<0.50	40.0	40.0	40.1	38.9	ug/L	EPA 8260B	3/25/05	100	97.2	3.12	70.130	25
Tert-Butanol	42953-02	<5.0	200	200	197	198	ug/L	EPA 8260B	3/25/05	98.4	99.2	0.813	70.130	25
Methyl-t-Butyl Ether	42953-02	15	40.0	40.0	55.6	54.7	ug/L	EPA 8260B	3/25/05	100	98.1	2.25	70.130	25
Benzene	42947-04	<0.50	40.0	40.0	37.5	36.4	ug/L	EPA 8260B	3/25/05	93.7	91.0	2.99	70.130	25
Toluene	42947-04	<0.50	40.0	40.0	35.1	34.2	ug/L	EPA 8260B	3/25/05	87.7	85.6	2.41	70.130	25
Tert-Butanol	42947-04	<5.0	200	200	190	186	ug/L	EPA 8260B	3/25/05	95.1	93.2	2.04	70.130	25
Methyl-t-Butyl Ether	42947-04	<0.50	40.0	40.0	38.8	38.4	ug/L	EPA 8260B	3/25/05	96.9	96.1	0.801	70.130	25
Benzene	42994-11	370	40.0	40.0	402	388	ug/L	EPA 8260B	3/28/05	68.3	35.0	64.4	70.130	25
Toluene	42994-11	4.9	40.0	40.0	43.6	42.2	ug/L	EPA 8260B	3/28/05	96.8	93.2	3.81	70.130	25
Tert-Butanol	42994-11	12	200	200	205	212	ug/L	EPA 8260B	3/28/05	96.3	99.8	3.54	70.130	25
Methyl-t-Butyl Ether	42994-11	<0.50	40.0	40.0	36.3	36.4	ug/L	EPA 8260B	3/28/05	90.8	90.9	0.0754	70.130	25

Approved By:


 Joe Kiff

KIFF ANALYTICAL, LLC
 2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

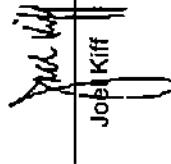
QC Report : Laboratory Control Sample (LCS)

Project Name : 7-Eleven Store #20244
 Project Number : 77EL.20244.05

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	3/25/05	110	70-130
Toluene	40.0	ug/L	EPA 8260B	3/25/05	109	70-130
Tert-Butanol	200	ug/L	EPA 8260B	3/25/05	107	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	3/25/05	90.4	70-130
Benzene	40.0	ug/L	EPA 8260B	3/24/05	96.4	70-130
Toluene	40.0	ug/L	EPA 8260B	3/24/05	100	70-130
Tert-Butanol	200	ug/L	EPA 8260B	3/24/05	96.5	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	3/24/05	85.2	70-130
Benzene	40.0	ug/L	EPA 8260B	3/25/05	96.4	70-130
Toluene	40.0	ug/L	EPA 8260B	3/25/05	89.6	70-130
Tert-Butanol	200	ug/L	EPA 8260B	3/25/05	94.3	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	3/25/05	103	70-130
Benzene	40.0	ug/L	EPA 8260B	3/28/05	105	70-130
Toluene	40.0	ug/L	EPA 8260B	3/28/05	102	70-130
Tert-Butanol	200	ug/L	EPA 8260B	3/28/05	104	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	3/28/05	102	70-130

KIFF ANALYTICAL, LLC

Approved By:
 2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800



John Kiff

SECOR Chain-of Custody Record

Field Office: 077 Sacramento
 Address: 3017 Kilkore Road, Suite 100
Rancho Cordova, CA

Additional documents are attached, and are part of this Record.

Job Name: 7-Eleven Store #20244

Location: 3625 MacDonald Avenue

Richmond, California

Project # 77EL.20244.05 Task # 0410

Project Manager Jaff Auchtertonne

Laboratory Kiff Analytical

Turnaround Time Standard

Sampler's Name Peng Yang

Sampler's Signature P.Y.

Sample ID HCl-preserved

Date Time Matrix

1/325 Water X X X

1/407 Water X X X

1/447 Water X X X

1/200 Water X X X

1/245 Water X X X

Analysis Request

Number of Contaminants

EPA 8260B
 6 Oxygenates (GCMS)
 Semi-volatile Organics
 625/8270 (GCMS)
 801/8010
 Halogenated Volatiles
 824/8240 (GCMS)
 Volatile Phenols
 602/8020
 Aromatic Volatiles
 TPH 4181A/TPH 4181
 TPH/GBTEX - EPA 8260
 8015 (modified)
 TPHD (Dissolve Only)

Comments/
Instructions

0.1	3
0.2	3
0.3	3
0.4	3
0.5	3
0.6	3
0.7	3
0.8	3
0.9	3
1.0	3

Received by: Peng Yang Received by: Peng Yang Received by: Peng Yang
 Sign Peng Yang Sign Peng Yang Sign Peng Yang
 Print Peng Yang Print Peng Yang Print Peng Yang
 Company SECOR Company SECOR Company SECOR
 Date 3-2-05 Date 3-2-05 Date 3-2-05

Relinquished by: Peng Yang Received by: Tom Miller Received by: Tom Miller
 Sign Peng Yang Sign Tom Miller Sign Tom Miller
 Print Peng Yang Print Tom Miller Print Tom Miller
 Company SECOR Company SECOR Company SECOR
 Date 3-2-05 Date 3-2-05 Date 3-2-05

Relinquished by: Tom Miller Received by: Tom Miller Received by: Tom Miller
 Sign Tom Miller Sign Tom Miller Sign Tom Miller
 Print Tom Miller Print Tom Miller Print Tom Miller
 Company SECOR Company SECOR Company SECOR
 Date 3-2-05 Date 3-2-05 Date 3-2-05

Special Instructions/Comments

6 Oxygenates: TAME, MIBE, EtBE, TBA, & DIPE
 Global ID #T0601300710 (SIRC)
 email EDD to dcatlin@secor.com
 email lab report to dhertzog@secor.com and
 tmiller@secor.com

**ATTACHMENT C
OXYGEN INJECTION FIELD NOTES**

Quarterly Groundwater Monitoring
Report – First Quarter 2005

7-Eleven Store #20244
3625 MacDonald Avenue
Richmond, California

JOB NAME:	7-Eleven Store #20244	JOB NUMBER:	77EL.20244.05.1006
SITE ADDRESS:	3625 MacDonald Ave.	START DATE:	1/11/2005 + 1/12/05
	Richmond, CA	DATE PREPARED:	1/7/2005
PREPARED FOR:	Tom	PREPARED BY:	Tom Miller

SITE VISITATION REPORT

Name(s) Tom Date: 1/11/05 Did you call in? Yes No
 Arrival Time: 0800 Departure Time: 1300 Who did you call? TM
 Weather Notations: SUN RAIN SNOW Temperature 48 F

DRUM INVENTORY

WATER	CARBON	TOTAL OPEN TOP
SOIL	EMPTY	TOTAL BUNG TOP

HEALTH AND SAFETY ASSESSMENT

H2S
TDAPAC
TRW3
FPR
O2 FLAME

INSTRUMENT CALIBRATION NOTES

Instrument Type YSI 550A

Instrument Calibration Method and Results

Calibration Readings Pre Injection: 10.53 / 10.68 Post Injection: 9.70 / 9.89

Agitated Water Readings: Pre Injection: 10.50 / 10.47 Post Injection: 9.61 / 9.80

Instrument Type QRAF+

Instrument Calibration Method and Results AIR = 20.9% O2

Instrument Type SQMST

Instrument Calibration Method and Results WHR

Instrument Type

Instrument Calibration Method and Results

JOB NAME:	7-Eleven Store #20244	JOB NUMBER:	77EL.20244.05.1006
SITE ADDRESS:	3625 MacDonald Ave.	START DATE:	1/11/2005 + 1/12/05
PREPARED FOR:	TDR	DATE PREPARED:	1/7/2005
		PREPARED BY:	Tom Miller

DESCRIPTION OF ACTIVITIES ON SITE AND NOTES (cont)

Field Work Conducted By: TDR

Date: 1/11/05 (Tues)

0800 ARRIVED ON SITE ON THE 7TH AND GONE IN 7H. SAFETY:

RASP - FOR PARASITE PROC.

PBS - RANGER, GLVS, GLSSS, PNPDS

TRAFFIC - VSB TRUCK AS A PARACHUTE HOLD

QARZ OFF WORK AREAS. BLACK STREET THEN DRIVING

TRIPS - BE CAUTIOUS IN RAIN.

ON FLAME - NO SMOKING GLVS, RASP

* CUT 3/4" WELL HOLE AND GLUED FENTON ADPT. FOR IND. CII-3.

PRE GR D0 = 10.53 AG = 10.50 / POST GR D0 = 9.70 AG = 9.61

TAKE PBS IN THE C TARGETS FOR MW-4, S THEN ONCE.

→ THEN IN THE ORDER REQUESTED, ONE BY ONE BY DALE DAVIS:

O2O2 INTO I-1 FOR 60 MN @ 30 PSI. VERY SLIGHT O2

MIGRATION TO MW-3. GLOVE INFLATION @ MW-3 VERY SLIGHT BUT NOTICABLE.

I-2 O2 INTO I-3 FOR 45 MN @ 30 PSI. FASTER O2

MIGRATION TO MW-3. O2 BUBBLING UP THRU THE WELD BOX FLOOR @ 30 AND 20 PSI. TBG UNEXPENDED DOWN HOLE? GLOVE INFLATION @ MW-3 THE MOST, INFLATED 2 FULL FINGERS.

I-3 O2 INTO I-2 FOR 60 MN. @ 30 PSI. O2 MIGRATION TO

MW-3 SLOWED AND IS THE LEAST OF THE 3 INGS.

O2 GLOVE INFLATION @ MW-3 NEGLIGIBLE.

POST DO D0 @ JUST MW-3 AS PER REQUESTED.

1300 DPT SITE

1/12/05

0800 ARRIVED ON SITE ON THE 7TH AND GONE IN 7H. SAFETY:

PRE GR D0 = 10.68 AG = 10.47. POST GR D0 = 9.89 AG = 9.80

TRAFFIC VERY PROHIBITIVE FOR WELL MONITORING, USE TRUCK AS PARACHUTE.

TAKE POST DO PBS @ MW-1, C3, 4. * MW-3 DO DROPPED THE

NEXT DAY LIKE IF GOT CARRIED AWAY BY UNDERGROUND WTR FLOW?

1600 DPT SITE

JOB NAME:	7-Eleven Store #20244	JOB NUMBER:	77EL.20244.05.1006
SITE ADDRESS:	3625 MacDonald Ave.	START DATE:	1/11/05 + 1/12/05
PREPARED FOR:	<i>Tom</i>	DATE PREPARED:	1/7/05
		PREPARED BY:	Tom Miller

WORK REQUEST FORM

WELL ID.	DTB ft.bgs	WELL DIAM.	DTW ft.TOC	D.O. Before Injection		D.O. After Injection		COMMENTS
				(mg/L)	time	(mg/L)	time	
MW-1	25.0	2"	9.10	2.40	0900	3.80	1245	Post D.O. next day 1/12/05 / time
MW-2	25.0	2"	8.70	2.70	0910	3.70	1255	3.90 - 0910 A.D. / 185 / 17.3
MW-3	25.0	2"	9.70	2.50	0920	7.00	1235	2.00 - 0920 19.7 / 20.9 / 17.6
MW-4	25.0	2"	12.60	3.60	0815	—	—	4.20 - 0840
MW-5	25.0	2"	10.20	2.40	0840	—	—	2.10 - 0915
I-1	27.0	3/4"						S.W.
I-2	27.0	3/4"						A.R.
I-3	27.0	3/4"						L

Q: DO INTR TIP W/ NEW SOLUTION AND P.S.

$$\text{Pre O2 DO} = 10.53 \quad | \quad 9.70 \quad | \quad 10.68 \quad | \quad 9.89 \\ \Delta G = 10.50 \quad | \quad 9.61 \quad | \quad 10.47 \quad | \quad 9.80$$

I-1 slow push to MW-3.

I-3 air lets out in the wet cement/wallbox floor

I-2 fast push to MW-3.

I-2 slowest push to MW-3

JOB NAME:	7-Eleven Store #20244	JOB NUMBER:	77EL20244.05.1006
SITE ADDRESS:	3625 MacDonald Ave.	START DATE:	1/11/05
	Richmond, CA	DATE PREPARED:	1/7/2005
PREPARED FOR:	7-Eleven	PREPARED BY:	Tom Miller

Oxygen Injection Monitoring Summary

				MW-1	19.2	0900	Pre-injection Readings
				MW-2	19.0	0910	Pre-injection Readings
				MW-3	19.7	0920	Pre-injection Readings
1-1	0930	1030	60	30	150	2.5	MW-1 19.2 0900
1-2	1130	1230	60	30	150	2.5	MW-1 19.0 0945
1-3	1030	1130	45	30-25	150	3.3	MW-1 19.7 0920
							MW-2 18.5 0955
							MW-2 17.3 1055
							MW-3 19.7 0920
							MW-3 17.0 1015
							MW-3 19.9 1105
							MW-3 19.0 1165

JOB NAME:	7-Eleven Store #20244	JOB NUMBER:	77EL.20244.05.1006
SITE ADDRESS:	3625 MacDonald Ave.	START DATE:	1/25/05 + 1/26/05
PREPARED FOR:	<u>SDR</u>	DATE PREPARED:	1/21/2005
		PREPARED BY:	Tom Miller

SITE VISITATION REPORT

Name(s) SDR Date: 1/25 + 1/26/05 Did you call in? Yes No _____
 Arrival Time: 1200 / 030 Departure Time: 1300 Who did you call? TIM
 Weather Notations: SUN CLOUD RAIN SNOW Temperature 38° F

DRUM INVENTORY

WATER	CARBON	TOTAL OPEN TOP
SOIL	EMPTY	TOTAL BUNG TOP

HEALTH AND SAFETY ASSESSMENT

HAZARD
TRAFFIC
TRIPS
O₂ FLAME
PPE

INSTRUMENT CALIBRATION NOTES

Instrument Type QSI 550P

Instrument Calibration Method and Results

Calibration Readings Pre Injection: 11.14 / 10.74 Post Injection: 10.80 / 10.51

Agitated Water Readings: Pre Injection: 11.68 / 10.90 Post Injection: 10.72 / 10.44

Instrument Type QRAFCT

Instrument Calibration Method and Results Aer = 20.9% O₂

Instrument Type DOLWST

Instrument Calibration Method and Results WCR

Instrument Type

Instrument Calibration Method and Results

JOB NAME:	7-Eleven Store #20244	JOB NUMBER:	77EL.20244.05.1006
SITE ADDRESS:	3625 MacDonald Ave.	START DATE:	1/25 + 1/26/02
PREPARED FOR:	JDR	DATE PREPARED:	1/21/2005
		PREPARED BY:	Tom Miller

DESCRIPTION OF ACTIVITIES ON SITE AND NOTES (cont)

Field Work Conducted By:

JDR

Date: 1/25/05 (TUE. MORN.)

800 AM YOU ON-SITE AND TALK W/ RANDAL AND TM. SAFETY: (LISTED ABOVE)
HASP-FAR & MEDIUM PRESS.

O₂ FLAME - POST NO SMOKING SIGNS, MONITOR O₂, + WIND
PPE - GLASS, GLOVES, VEST, KN - PDS

TRAFFIC - TAPE + CONE OFF TRUCK + WHEELS, LOCK TRUCK
TRIPS - BY ALERT.

ALWAYS USE TRUCK AS TRAFFIC CONGESTION STREETS + PLS

PPL CAL DO = , AG. WTR = / POST CAL DO = , AG. WTR =

TAKE WELL PICS ON + OFF SITE IN STREETS

0900 AS PER REQ. FOR O₂ MIGRATION (BY D.D) START O₂ INJ @

I-1 FOR 30 MIN @ 30 PSI. NOTICED THAT THE BOTTLE
PRESSURE HADN'T DROPPED FROM 1500 PSI (2200 PSI STARTING)

UPPED THE INJ. PRESS. 30 TO 40 PSI FOR ANOTHER 30 MIN.

* MW-3 TOOK A VERY SLIGHT AMOUNT OF FLOW INCREASE BY
VERY SLIGHTLY INFLATING THE CAPPED (MW-3) WELL WITH
A PLASTIC BAG SEALED AROUND THE TOP OF THE CEG W/ A RUBBER
BAND.

1000 O₂ INJ. STARTED TO I-3 FOR 35 PSI FOR 60 MIN.

* MW-3 INCREASED QUITE A BIT, INFLATING THE BAG ALMOST FULL.
THE WELL STILL HAS SOME O₂ LEAKING AROUND THE WELL (SG).

1100 O₂ INJ. STARTED TO I-2 FOR 35 PSI FOR 60 MIN.

* NO NOTICABLE INFLATION @ THE MW-3 PLASTIC BAG OVER THE WELL.

1200 POST DO's TAKEN @ MW-1,2,3 AS PER REQ. THEN DPT SITE.

JDR

1/26/05 (WED. MORN.)

0800 YOU ON-SITE AND TALK W/ RANDAL AND TM. SAFETY: (LISTED ABOVE)

PPL CAL DO = , AG. WTR = / POST CAL DO = , AG. WTR =

TAKE - POST DO's @ MW-1, 2, 3, 4, 5 ON + OFF SITE.

1100 GRANT IN I-3 WELL PROPS OUT OF EXISTING GRANT TO TEE AND SEAL O₂ INJ.
1200 DPT SITE.

JOB NAME:	7-Eleven Store #20244	JOB NUMBER:	77EL.20244.05.1006
SITE ADDRESS:	3625 MacDonald Ave.	START DATE:	1/25/05 + 1/26/05
PREPARED FOR:	JDR	DATE PREPARED:	1/21/05
		PREPARED BY:	Tom Miller

WORK REQUEST FORM

WELL I.D.	DTB ft bgs.	WELL DIAM.	DTW ft TOC	DO Before Injection		DO After Injection		NOTES	COMMENTS
				(mg/L)	time	(mg/L)	time		
MW-1	25.0	2"	10.70	2.50	0900	3.00	1255	3.70 - 0900	
MW-2	25.0	2"	10.50	3.00	0910	4.20	1245	4.40 - 0910	
MW-2 MW-3	25.0	2"	10.60	4.10	0920	8.20	1235	7.80 - 0920	
MW-4	25.0	2"	12.40	3.00	0845	NOT TAKEN		3.80 - 0845	
MW-5	25.0	2"	11.60	2.40	0820	NOT TAKEN		2.80 - 0820	
I-1	27.0	3/4"							
I-2	27.0	3/4"							
I-3	27.0	3/4"							

~~SEALED WELLS~~

1/26/05

$$\text{CAL DO} = 11.14 / 10.76 = \text{Post CAL DO}$$

$$\text{to AG} = 11.68 / 10.90 = \text{H}_2\text{O AG}$$

1/27/05

$$\text{Pre CAL DO} = 10.88 / 10.51 = \text{Post CAL DO}$$

$$\text{H}_2\text{O AG} = 10.73 / 10.41 = \text{to AG}$$

JOB NAME: 7-Eleven Store #20244
 SITE ADDRESS: 3625 MacDonald Ave.
 PREPARED FOR: Richmond, CA *Tom*

JOB NUMBER: 77EL20244.05.1006
 START DATE: 1/25/05 *1/25/05*
 DATE PREPARED: 1/21/2005
 PREPARED BY: Tom Miller

Oxygen Injection Monitoring Summary

Injection Well	Start Time	Elapsed Time	O2 Pressure (PSI)	O2 Injection Rate (cm/min)	O2 Injection Volume (cubic Feet)	Adjacent Monitoring Point	O2 Reading (ppmEL)	Dose (g/EL)	ET Time	NOTES	
										MW-1	MW-2
I-1, 2	-	-	-	-	-	MW-1	18.9	0400	Pre-injection Readings		
	-	-	-	-	-	MW-2	18.7	0400	Pre-injection Readings		
						MW-3	19.4	0400	Pre-injection Readings		
I-1	0930	1020	60	30-40	150	MW-1	18.9	0400			
						MW-1	18.3	0940			
I-2	1130	1230	60	35	150	2.5	MW-1	17.5	1255		
							MW-2	18.7	0940		
I-3	1030	1130	60	35	150	2.5	MW-2	18.2	0950		
							MW-2	17.3	1245		
							MW-3	19.4	0920		
							MW-3	11.7	1000		
							MW-3	9.6	1120		
							MW-3	8.7	1235		

JOB NAME:	7-Eleven Store #20244	JOB NUMBER:	77EL.20244.05.1006
SITE ADDRESS:	3625 MacDonald Ave.	START DATE:	2/8/05
	Richmond, CA	DATE PREPARED:	2/7/2005
PREPARED FOR:	<u>Tom</u>	PREPARED BY:	Tom Miller

SITE VISITATION REPORT

Name(s) Tom Date: 2/8/05 Did you call in? Yes No
 Arrival Time: 1130 Departure Time: 1530 Who did you call? Tim
 Weather Notations: SUN Cloudy RAIN SNOW Temperature 55° F

DRUM INVENTORY

WATER	CARBON	TOTAL OPEN TOP	<u>D</u>
SOIL	EMPTY	TOTAL BUNG TOP	<u>P</u>

HEALTH AND SAFETY ASSESSMENT

ASP
PPK
O2 FLAME
TRIPS
TRAFFIC

INSTRUMENT CALIBRATION NOTES

Instrument Type VGA STO A

Instrument Calibration Method and Results

Calibration Readings Pre Injection: 10.68 Post Injection: 10.32

Agitated Water Readings: Pre Injection: 10.59 Post Injection: 10.30

Instrument Type O2AP +

Instrument Calibration Method and Results Air - 20.9% O2

Instrument Type SORINST

Instrument Calibration Method and Results WTR

Instrument Type

Instrument Calibration Method and Results

JOB NAME:	7-Eleven Store #20244	JOB NUMBER:	77EL.20244.05.1006
SITE ADDRESS:	3625 MacDonald Ave.	START DATE:	2/02/05
	Richmond, CA	DATE PREPARED:	2/7/2005
PREPARED FOR:	<u>JDR</u>	PREPARED BY:	Tom Miller

DESCRIPTION OF ACTIVITIES ON SITE AND NOTES (cont)

Field Work Conducted By: JDR

Date: 2/03/05

1130 ADV ONSITE AND CHK W/711 AND CAR TM. SAFETY:
HHR - FIRE EXTINGUISHING. PPE.

PPE - GLOVES, GLASS WEST, HHR, KN-PDS

TRIPS - DUE AWAY.

TRAFFIC - TAKE OFF TRUCK + WHEELS, USE TRUCK AS
TRAFFIC BARRICADE.

O2 FUME - NO SMOKING SIGNS, WIND DIR. ?!

PRE-CR DD = 10.68

WTR AG = 10.59

POST CR DD = 10.32

WTR AG = 10.30

TAKE RAGS - USE TRUCK IN - TRAFFIC CONTROL @ STREET
AND PARKING LOTS.

1300 STARTED O2 ING @ I-1, 2, 3.

I-1, 2 FOR 60 MIN. @ 35 PSI.

I-3 FOR 50 MIN. @ 35 PSI. AFTER REGRATING
THE WHEEL BASE ZINGS PRIOR, THERE STILL IS A SLIGHT
AIR LEAK AROUND THE CSG.

1430 TAKE POST DO's @ ALL WHEELS.

1530 DEPART SITE

JOB NAME:	7-Eleven Store #20244	JOB NUMBER:	77EL.20244.05.1006
SITE ADDRESS:	3625 MacDonald Ave.	START DATE:	<u>2/28/05</u>
PREPARED FOR:	<u>TDR</u>	DATE PREPARED:	<u>2/27/05</u>
		PREPARED BY:	Tom Miller

WORK REQUEST FORM

WELL ID.	DTB ft.bgs	WELL DIAM.	DTW ft TOC	DO Before Injection		DO After Injection		AFTER INJECTION TIME	COMMENTS
				(mg/L)	time	(mg/L)	time		
MW-1	25.0	2"	11.40	2.60	1225	3.90	1450		
MW-2	25.0	2"	11.20	3.40	1235	4.40	1440		
MW-3	25.0	2"	10.00	8.00	1245	17.60	1430		
MW-4	25.0	2"	11.90	3.00	1145	3.00	1515		
MW-5	25.0	2"	11.20	2.20	1210	2.20	1530		
I-1	27.0	3/4"		<u>SEALED</u>		<u>WPLS</u>			
I-2	27.0	3/4"							
I-3	27.0	3/4"							

~~10.68/1032~~

~~10.59/1030~~

JOB NAME:	7-Eleven Store #20244	JOB NUMBER:	77EL20244-05.1006
SITE ADDRESS:	3625 MacDonald Ave. Richmond CA	START DATE:	<u>2/8/05</u>
PREPARED FOR:	<u>Tom Miller</u>	DATE PREPARED:	<u>2/7/2005</u>
		PREPARED BY:	<u>Tom Miller</u>

Oxygen Injection Monitoring Summary

Injection Time	Start Time	Elapsed Time	Injection Pressure (PSI)	Injection Volume (Cubic Feet)	O2	O2	O2	O2	NOTES
					Injection Rate (cfm)	Monitoring Point	Vadose (% LEL)	Reading Time	
I-1, 2, 3					-	-	-	MW-1 18.12	12:25 Pre-injection Readings
					-	-	-	MW-2 18.4	12:35 Pre-injection Readings
								MW-3 19.1	12:45 Pre-injection Readings
I-1, 2	13:00	14:00	60	35	150 ea	2.5	MW-1 18.6	12:25	
							MW-1 18.0	13:10	
I-3	13:00	13:50	50	35	150	3.0	MW-1 17.2	13:30	
							MW-2 18.4	12:35	
							MW-2 17.9	13:15	
							MW-2 16.8	13:40	
							MW-3 19.1	12:45	
							MW-3 11.4	13:20	
							MW-3 9.3	13:45	

JOB NAME:	7-Eleven Store #20244	JOB NUMBER:	77EL.20244.05.1006
SITE ADDRESS:	3625 MacDonald Ave.	START DATE:	2/23/05
	Richmond, CA	DATE PREPARED:	2/7/2005
PREPARED FOR:	JDR	PREPARED BY:	Tom Miller

SITE VISITATION REPORT

Name(s) JDR Date: 2/23/05 Did you call in? Yes No
 Arrival Time: 0830 "Departure Time: 1215 Who did you call? TMR
 Weather Notations: SUN CLOUDS RAIN SNOW Temperature 50 F

DRUM INVENTORY

WATER	CARBON	TOTAL OPEN TOP
SOIL	EMPTY	TOTAL BUNG TOP

HEALTH AND SAFETY ASSESSMENT

HASP
DPS
TRIPS
TRAFFIC
Dr. Flame

INSTRUMENT CALIBRATION NOTES

Instrument Type YSI 550A

Instrument Calibration Method and Results

Calibration Readings Pre Injection: 10.26 Post Injection: 9.44

Agitated Water Readings: Pre Injection: 10.32 Post Injection: 9.50

Instrument Type O2 ABT

Instrument Calibration Method and Results AIR = 20.9% O2

Instrument Type S21NSC

Instrument Calibration Method and Results WTR

Instrument Type

Instrument Calibration Method and Results

JOB NAME:	7-Eleven Store #20244	JOB NUMBER:	77EL.20244.05.1006
SITE ADDRESS:	3625 MacDonald Ave.	START DATE:	2/23/05
RICHMOND, EA		DATE PREPARED:	2/7/2005
PREPARED FOR:	JDR	PREPARED BY:	Tom Miller

DESCRIPTION OF ACTIVITIES ON SITE AND NOTES (cont)

Field Work Conducted By: JDR

Date: 2/23/05

0830 ARR ON SITE TALKED TO (Gill) AND TM. GATE TOP;
 HASP - FOR EMERGEN. PROC.
 TRAFFIC - TAPE OFF AND CONE MY TRUCK AND WHEELS.
 TRIPS - WATCH OUT!
 PPE - GLOVES, GLASSES, NEST. KN - PDS.
 O2 FLAME - NO SMOKING SIGNS, MONITOR O2 W/ WIND.

PRE-CAL DO = 10.26
 AS WTR = 10.32

POST CAL DO = 9.44
 AS WTR = 9.50

TAKE W/ W/ RODS W/ TRUCK AS BACKUP

1000 O2 WTS @ I-12,3.
 I-1,2,3 FOR 60 min @ 35 PSI.

1130 TAKE POST DO's.

1215 DPT SITE.

JOB NAME:	7-Eleven Store #20244	JOB NUMBER:	77EL.20244.05.1006
SITE ADDRESS:	3625 MacDonald Ave.	START DATE:	<u>2/23/05</u>
PREPARED FOR:	<u>JDR</u>	DATE PREPARED:	2/7/05
		PREPARED BY:	Tom Miller

WORK REQUEST FORM

WELL I.D.	DTB ft.bgs	WELL DIAM.	DTW ft.TOC	D.O. Before Injection		D.O. After Injection		COMMENTS
				(mg/L)	time	(mg/L)	time	
MW-1	25.0	2"	11.20	1.20	0935	3.10	1145	
MW-2	25.0	2"	11.40	1.80	0945	3.80	1155	
MW-3	25.0	2"	9.90	2.90	0955	14.10	1205	
MW-4	25.0	2"	11.30	1.60	0845	---	---	
MW-5	25.0	2"	11.00	0.90	0910	---	---	
I-1	27.0	3/4"	SCATTERED	WELLS				
I-2	27.0	3/4"	SCATTERED	WELLS				
I-3	27.0	3/4"	SCATTERED	WELLS				

10.26/9.84
10.32/9.50

JOB NAME: 7-Eleven Store #20244
SITE ADDRESS: 3625 MacDonald Ave.
PREPARED FOR: 150

JOB NUMBER: 77EL 20244.05.1006
START DATE: 2/27/05
DATE PREPARED: 2/7/2005
PREPARED BY: Tom Miller

Oxygen Injection Monitoring Summary

Injection Well	Site ID	Location	Injection Pressure (psi)	O2 Injection Volume (cubic feet)	Adj. Monitoring Point	O2 Reading (ppm)	Vadose (% LEL)	Time	NOTES
-	-	-	-	-	MW-1	18.9	0935		Pre-injection Readings
-	-	-	-	-	MW-2	18.7	0945		Pre-injection Readings
-	-	-	-	-	MW-3	19.4	0955		Pre-injection Readings
I-1									
I-1,2,3	1600	60	35	150(4)	2.5	MW-1	18.9	0935	
						MW-1	19.2	1010	
						MW-1	17.5	1055	
						MW-2	18.1	0945	
						MW-2	17.9	1015	
						MW-2	17.0	1045	
						MW-3	19.4	0955	
						MW-3	11.7	1020	
						MW-3	19.0	1055	

JOB NAME:	7-Eleven Store #20244	JOB NUMBER:	77EL.20244.05.1006
SITE ADDRESS:	3625 MacDonald Ave.	START DATE:	3/8/05
	Richmond, CA	DATE PREPARED:	3/2/2005
PREPARED FOR:	JDR	PREPARED BY:	Tom Miller

SITE VISITATION REPORT

Name(s) JDR Date: 3/8/05 Did you call in? Yes No
 Arrival Time: 0830 "Departure Time: 1230 Who did you call? TM
 Weather Notations: SUN RAIN SNOW Temperature 55 F

DRUM INVENTORY

WATER	CARBON	TOTAL OPEN TOP
SOIL	EMPTY	TOTAL BUNG TOP

HEALTH AND SAFETY ASSESSMENT

HAZO
TRIPS
PPG
TRAFFIC
OZ FLAME

INSTRUMENT CALIBRATION NOTES

Instrument Type YSI 550A

Instrument Calibration Method and Results

Calibration Readings Pre Injection: 9.48 Post Injection: 8.93

Agitated Water Readings: Pre Injection: 9.54 Post Injection: 8.99

Instrument Type QPAR +

Instrument Calibration Method and Results AIR = 20.9% O₂

Instrument Type SORVOL

Instrument Calibration Method and Results WTM

Instrument Type

Instrument Calibration Method and Results

JOB NAME:	7-Eleven Store #20244	JOB NUMBER:	77EL.20244.05.1006
SITE ADDRESS:	3625 MacDonald Ave.	START DATE:	3/8/05
PREPARED FOR:	SDR	DATE PREPARED:	3/2/2005
		PREPARED BY:	Tom Miller

DESCRIPTION OF ACTIVITIES ON SITE AND NOTES (cont)

Field Work Conducted By: SDR

Date: 3/8/05

0830 ARRIVED ON SITE - TRUCK TO DISBY (7-11) AND THE SAFETY
LAPSP - FOR EMERG. PROT

0845 - MONITOR DRILL, NO SMOKING SITES

TRAFFIC - TAPE/CONE OFF TRUCK + WALLS

TRIPS - BE CAREFUL!

PPE - GLVS, GLSS, VEST, KN-PDS

PRE-CAL DD = 9.48

AS WTR = 9.54

POST CAL DD = 8.93

AB WTR = 8.99

MOVE WHEEL ROLLS @ BOTH STREET + ON SITE
LOCATIONS - USE TRUCK AS BARRICADE

1000 DRILL @ I-1, 2, 3 FOR 60 MM @ 35 PSI.

1130 TRUCK POST DD's

1230 DPT SITE

JOB NAME:	7-Eleven Store #20244	JOB NUMBER:	77EL.20244.05.1006
SITE ADDRESS:	3625 MacDonald Ave.	START DATE:	3/8/05
PREPARED FOR:	JDR	DATE PREPARED:	3/2/05
		PREPARED BY:	Tom Miller

WORK REQUEST FORM

WELL I.D.	DTB ft bgs	WELL DIAM.	DTW ft TOC	D.O. Before Injection		D.O. After Injection		COMMENTS
				(mg/L)	time	(mg/L)	time	
MW-1	25.0	2"	10.40	1.80	0930	3.80	1200	
MW-2	25.0	2"	10.70	2.00	0940	4.00	1225	
MW-2	25.0	2"	9.60	3.30	0950	16.00	1210	
MW-4	25.0	2"	11.40	1.20	0845	--	--	
MW-5	25.0	2"	10.70	0.80	0912	--	--	
I-1	27.0	3/4"	SEALED	WELL				
I-2	27.0	3/4"	SEALED	WELL				
I-3	27.0	3/4"	SEALED	WELL				

9.48/8.93

9.54/8.99

JOB NAME:	7-Eleven Store #20244	JOB NUMBER:	77EL20244.05.1006
SITE ADDRESS:	3625 MacDonald Ave.	START DATE:	<u>4/8/05</u>
	Richmond, CA	DATE PREPARED:	<u>3/2/2005</u>
PREPARED FOR:	<u>Tom Miller</u>	PREPARED BY:	

Oxygen Injection Monitoring Summary

Injection Well	Time			O2	O2	O2	O2	Adjacent Monitoring Point	NOTES
	Start	Finished	Elapsed	Injection Pressure (PSI)	Injection Volume (cubic Feet)	Injection Rate (cfm)	Vadose (% LEL)		
I-1, 2, 3	--	--	--	--	--	--	MW-1	18.2	0930 Pre-injection Readings
	--	--	--	--	--	--	MW-2	18.0	0945 Pre-injection Readings
							MW-3	18.7	0950 Pre-injection Readings
I-1, 2, 3	1000	1100	60	35	150 (EA.)	2.5	MW-1	18.7	0930
							MW-1	17.6	1010
							MW-1	16.8	1050
							MW-2	18.0	0945
							MW-2	17.2	1015
							MW-2	16.3	1040
							MW-3	18.7	0950
							MW-3	11.0	1020
							MW-3	8.9	1030

JOB NAME:	7-Eleven Store #20244	JOB NUMBER:	77EL.20244.05.1006
SITE ADDRESS:	3625 MacDonald Ave.	START DATE:	3/22/05
RICHMOND, CA		DATE PREPARED:	3/16/2005
PREPARED FOR:	<u>JDR</u>	PREPARED BY:	Tom Miller

SITE VISITATION REPORT

Name(s) JDR Date: 3/22/05 Did you call in? Yes No
 Arrival Time: 0830 "Departure Time: 1200 Who did you call? D. DAVIS
 Weather Notations: SUN RAIN SNOW Temperature 48° F

DRUM INVENTORY

WATER	CARBON	TOTAL OPEN TOP	<u>0</u>
SOIL	EMPTY	TOTAL BUNG TOP	<u>0</u>

HEALTH AND SAFETY ASSESSMENT

dust
fire FLAME
TRIPS
TRAFFIC
PPE

INSTRUMENT CALIBRATION NOTES

Instrument Type YSI 550A

Instrument Calibration Method and Results

Calibration Readings Pre Injection: 10.21 Post Injection: 9.70

Agitated Water Readings: Pre Injection: 10.34 Post Injection: 9.81

Instrument Type QRAE +

Instrument Calibration Method and Results AIR = 20.9% O₂

Instrument Type SOLNSC

Instrument Calibration Method and Results WTR

Instrument Type

Instrument Calibration Method and Results

JOB NAME:	7-Eleven Store #20244	JOB NUMBER:	77EL.20244.05.1006
SITE ADDRESS:	3625 MacDonald Ave.	START DATE:	3/22/05
PREPARED FOR:	<u>TDR</u>	DATE PREPARED:	3/16/2005
		PREPARED BY:	Tom Miller

DESCRIPTION OF ACTIVITIES ON SITE AND NOTES (cont)

Field Work Conducted By:

JDR

Date: 3/22/05

0830 ARRIVED ON SITE TALKED W/ TONYA (7-11) AND D.D. STAFFER.
 HAZP - FOR REAR 26. PROC.
 PPE - RAINBREATH, GLOVES, GUNS, KN-FDS
 O₂ FLAME - MONITOR O₂ LEVELS, NO SMOKING SIGNS
 TRAFFIC - TAPE OFF TRUCK AND WHEELS
 TRIPS - WATCH OUT!

PRE CAL DO = 10.21
 AS WTR = 10.34

POST CAL DO = 9.70
 AS WTR = 9.81

TAKE WHEEL RAGS - USE TRUCK FOR TRAFFIC CONTROL, IT IS
 VERY RAINY.

1000 O₂ 10X @ I-1, 2, 3 FOR 60 MIN @ 35 PSI.

1130 TAKE POST DOs @ MMW-1, 2, 3

1200 DPT SITE

JOB NAME:	7-Eleven Store #20244	JOB NUMBER:	77EL.20244.05.1006
SITE ADDRESS:	3625 MacDonald Ave.	START DATE:	<u>3/22/05</u>
PREPARED FOR:	<u>TDR</u>	DATE PREPARED:	3/16/05
		PREPARED BY:	Tom Miller

WORK REQUEST FORM

WELL I.D.	DTB ft bgs.	WELL DIAM.	DTW ft TOC	DO Before Injection		DO After Injection		COMMENTS
				(mg/L)	time	(mg/L)	time	
MW-1	25.0	2"	10.30	2.60	0925	3.40	1150	
MW-2	25.0	2"	10.30	2.40	0935	4.00	1140	
MW-3	25.0	2"	10.20	7.00	0945	16.60	1130	
MW-4	25.0	2"	12.70	2.20	0845			No post-DO measurement
MW-5	25.0	2"	10.80	2.00	0910			No post-DO measurement
I-1	27.0	3/4"						Sealed well
I-2	27.0	3/4"						Sealed well
I-3	27.0	3/4"						Sealed well

10-21/9.70

10-34/9.81

JOB NAME:	7-Eleven Store #20244	JOB NUMBER:	77EL.20244.05.1006
SITE ADDRESS:	3625 MacDonald Ave.	START DATE:	<u>3/22/05</u>
PREPARED FOR:	Richmond CA <u>A</u>	DATE PREPARED:	<u>3/16/2005</u>
		PREPARED BY:	Tom Miller

Oxygen Injection Monitoring Summary

Injection Well	Time Start	Time Finished	O2 Injection Pressure (PSI)	O2 Injection Volume (cubic Feet)	O2 Injection Rate (cfm)	Adjacent Monitoring Point	O2 Reading Vadose (% LEL)	O2 Reading Time	Notes
I-1 / I-2 / I-3	-	--	--	--	--	MW-1	18.2	0925	Pre-injection Readings
	-	--	--	--	--	MW-2	18.0	0935	Pre-injection Readings
						MW-3	18.7	0945	Pre-injection Readings
I-1,2,3	1000	1100	150 psi	35	150 fta	2.5	MW-1	18.2	0925
						MW-1	17.6	1010	
						MW-1	17.2	1045	
						MW-2	18.0	0935	
						MW-2	17.5	1015	
						MW-2	16.4	1050	
						MW-3	18.7	0945	
						MW-3	11.0	1020	
						MW-3	9.1	1055	